



THE OFFICIAL PUBLICATION OF

IJM

GLAFIMS ACADEMY

VOLUME-I NUMBER-I

2023

THEME: CHILD ABUSE

**An international peer and expert reviewed journal dedicated
in the service of Forensic Medicine, Forensic Toxicology,
Forensic Science and Allied Forensic Sciences**

International Journal of Medical Justice



Official Publication of GLAFIMS ASSOCIATION
An international peer and expert reviewed journal in
the service Of Forensic Medicine, Forensic Toxicology,
Forensic Science and Allied Forensic Sciences
Email: editor@ijmj.net Web: <https://www.ijmj.net>

Table of Content

Volume 1, Issue 1, Year 2023

January -June 2023

Date of Publication: Sunday January 15, 2023

Date of Online Availability: Thursday January 26, 2023

Content list Available at <https://www.ijmj.net/archive/2023>

Journal Homepage: <https://www.ijmj.net>



OpenAIRE ICMJE INTERNATIONAL COMMITTEE of
MEDICAL JOURNAL EDITORS



S. No	Title and authors	Type	Corresponding Author	Page No.
1	From the Desk of Editor in Chief Birth of new journal dedicated to serve medical justice system, IJMJ Imran Sabri.	Editorial	Dr Imran Sabri	1-2
2	Job and social problems due to morphine positivity: abuse or food contamination? Mattia Sicilia, Michela Maria Guarino, Elisabetta Moroni, Vincenzo Agostini.	Original	Dr Vincenzo Agostini	3-22
3	Art of Parenting vs Parental Child Abuse - Choose a Right Path Pragnesh Parmar, Gunvanti Rathod.	Review	Dr Pragnesh Parmar	23-26
4	A Fatal Case of ruptured carotid aneurysm A. Haricharan, Soibam Neha, Asho Angami, Lourembam Frieny, Th. Meera Devi.	Case Report	Dr Haricharan A	27-31
5	The POCSO ACT 2012 : Stop the Abuse , Stop the Cruelty , Stop the Slaughter ! Perumal P, Ravindra S Honnunar, Lakshmibharathi M.	Review	Dr Perumal P	32-48
6	A roadmap for saviors: role of doctors in medicolegal care in relation to POCSO ACT Dhananjay Kumar, Satish Kumar Khalkho, S.K. Pandey.	Review	Dr Dhananjay Kumar	49-57

Copyright (c) 2023 International Journal of Medical Justice, IJMJ. This work is licensed under a

[Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.](https://creativecommons.org/licenses/by-nc-nd/4.0/)



Editorial Office:

G-1, City Center, Medical College Road, Aligarh 202001 UP, INDIA
Email: glafims@gmail.com web: www.glafims.org Mobile No: 0091-9897830036



International Journal of Medical Justice

Official Publication of GLAFIMS ASSOCIATION

Editor in Chief

Dr Imran Sabri, MD FRCP Edin

Assistant Editor in Chief

Dr Parmod K. Goyal

Managing Editors

Dr Pooja Rastogi

Dr Chaitanya Mittal

Dr Afzal Haroon



OpenAIRE ICMJE

INTERNATIONAL COMMITTEE of
MEDICAL JOURNAL EDITORS



An international peer and expert reviewed journal in the
service of Forensic Medicine, Forensic Toxicology, Forensic Science
and Allied Forensic Sciences

Editorial Office:

G-1, City Center, Medical College Road, Aligarh 202001 UP, INDIA

Email: editor@ijmj.net Web: <https://www.ijmj.net>

Mobile No: +91-9897830036



International Journal of Medical Justice

IJMJ

Correspondence:

Editor-in-Chief/Editor

International Journal of Medical Justice

Head office Address:

G-1, Ground Floor, City Center, Medical Road,
Aligarh 202002 India

E-Mail:

editor@ijmj.net [Journal]

editor.ijmj@gmail.com [Editor]

glafims@gmail.com [GLAFIMS ACADEMY]

Website of Journal: www.ijmj.net

Website of GLAFIMS: www.glafims.org [Organization]

Live Membership: www.glafims.com

Governing Council 2023- GLAFIMS INDIA

Advisory Board:

Dr Vijay Pal Khanagwal

Dr Pragnesh B. Parmar

Dr Chaitanya Mittal

President:

Dr Imran Sabri

Vice-President:

Dr. B. Vasanth Naik

General Secretary:

Dr Suraj Sundaragiri

Joint Secretary:

Dr. Seema Sutay

Treasurer:

Dr Afzal Haroon

Executive Committee

Dr Parmod Kumar Goyal

Dr Yatiraj Singi

Dr Richa Gupta

Dr George Paul

Ms Roma Khan

Dr R. Sridhara Chary

Dr MD Nazeerulla Shaik

Dr Haricharan.A

Dr V. Nagaraju Kampa

Dr Shruthi Jillella

Dr Barakha Gupta

Dr Nandam P. Rao

Dr Pooja Rastogi

Dr. Pooja Chakraborty

Dr Richa Choudhury

Dr Lalit Kumar



Title of Journal:

International Journal of Medical Justice, IJMJ

Volume 1, Issue 1, Year 2023

Place of Publication: Aligarh

Published by: GLAFIMS ASSOCIATION

**Publisher Address: G-1, City Center, Medical College Road,
Aligarh 202001 UP, INDIA**

Copyright © by Global Academy of Forensic and Investigative Medicine and Science [GLAFIMS ACADEMY] and International Journal of Medical Justice, IJMJ. All rights reserved. No part of this publication should be reproduced, stored in a retrieval system, or transmitted in any form by any means: electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of the GLAFIMS ASSOCIATION. GLAFIMS Association [Non-Profit Organisation] is a registered with Government of India [registration number is 157354] under the company act, 2013 (18 of 2013. GLAFIMS Association or GLAFIMS ACADEMY is abbreviation of the Global Academy of Forensic and Investigative Medicine and Science.

Web: www.glafims.org

GLAFIMS ACADEMY
ACDAMIC WING OF GLAFIMS ASSOCIATION
A REGISTERED NGO

VISION: “To uplift the status of forensic medicine, investigative medicine and allied health science nationally and internationally by promoting mutual interaction between stakeholders for the advancement of relevant scientific knowledge”.

Head Office:

GLAFIMS ASSOCIATION
G-1, City Center,
Medical College Road,
Aligarh 202002
Uttar Pradesh INDIA
Email: glafims@gmail.com
Phone: 0091-9897830036
Web: www.glafims.org

International Journal of Medical Justice, IJMJ

Editorial Board: 2022-2025

Editor-in-Chief

Dr Imran Sabri

Head of Division of Forensic Medicine

Department of Bio-Medical Sciences, College of Medicine,

King Faisal University, Al-Ahsa-

IP Phone [Direct]:+966-13-589-7810

Email: ikhan@kfu.edu.sa editor@ijmj.net

Assistant Editor-in-Chief/Editor

Dr Parmod Kumar Goyal,

Professor & Head (Forensic Medicine),

Adesh Institute of Medical Sciences & Research, Bathinda

Email: drparmodgoyal@gmail.com , editor.ijmj@gmail.com

Editors [Managing Editors]:

Dr Pooja Rastogi

Professor & HoD, Forensic Medicine and Toxicology

School of Medical Sciences and Research,

Sharda University Greater Noida, India

Email: pooja.rastogi@sharda.ac.in

Dr Chaitanya Mittal

Assistant Professor, Forensic Medicine

Dr. B. C. Roy Multi-Speciality Medical Research Centre (BCRMMRC),

IIT KHARAGPUR, West Bengal, INDIA

Email: chaitanya_sog@yahoo.co.in

Dr. Afzal Haroon

Associate Professor and Head

Department of Forensic Medicine & Toxicology

Aligarh Muslim University, Aligarh

Email: drafzal007@gmail.com

Chairman, National Associate Editors

Dr. Vijay Pal Khanagwal

Professor & Head,
Department of Forensic Medicine & Toxicology,
Kalpana Chawla Government Medical College,
Karnal (Haryana) India
Email: drvijaykhanagwal@yahoo.co.in

Chairman, International Associate Editors, IJMJ

Dr George Paul

Branch Director & Senior Consultant Forensic Pathologist-
Forensic Medicine Division, Health Sciences Authority, Singapore
Undergraduate Medical Director-Forensic Medicine YLL School of
Medicine,
NUS, Sr Lecturer- LKC School of Medicine Singapore
Forensic Medicine Division, Health Sciences Authority. Singapore
Email: george_paul@hsa.gov.sg

Coordinator, Editorial Assistance

Dr Richa Gupta

Associate Professor and Head,
Department of Forensic Medicine
Sarojini Naidu Medical College, Agra
Email: snmcforensic2020@gmail.com assistanteditor@ijmj.net

Coordinator, Reviewers Panel:

Dr. Pooja Chakraborty

Head of Department,
Department of Forensic Science and Criminology,
Annai Fathima College of Arts and Science,
Madurai , Tamil Nadu, INDIA
Email: pooja14asd@gmail.com reviewerpanel@ijmj.net

List of Life Members GLAFIMS ACADEMY

S	Name	ID	Date of Joining	City	Country
1	Imran Sabri	LMG-001	December 24, 2021	Aligarh	India
2	Chaitanya Mittal	LMG-002	September 3, 2022	Kharagpur	India
3	Suraj Sundaragiri	LMG-003	September 3, 2022	Hyderabad	India
4	Parmod Kumar Goyal	LMG-004	September 3, 2022	Bhatinda	India
5	Pragnesh B. Parmar	LMG-005	September 3, 2022	Hyderabad	India
6	Afzal Haroon	LMG-006	September 4, 2022	Aligarh	India
7	Seema Sutay	LMG-007	September 12, 2022	Khandwa	India
8	Yatiraj Singi	LMG-008	September 14, 2022	Bilaspur	India
9	Roma Khan	LMG-009	September 29, 2022	Mumbai	India
10	Richa Gupta	LMG-010	September 29, 2022	Agra	India
11	Vijay Pal Khanagwal	LMG-011	December 24, 2022	Karnal	India
12	George Paul	LMG-012	October 02, 2022	Singapore	Singapore
13	R. Sridhara Chary	LMG-013	October 12, 2022	Hyderabad	India
14	B. Vasanth Naik	LMG-014	October 13, 2022	Secundarabad	India
15	MD Nazeerulla Shaik	LMG-015	November 2, 2022	Warangal	India
16	Haricharan.A	LMG-016	November 19, 2022	Pondicherry	India
17	Venkat Nagaraju Kampa	LMG-017	December 02, 2022	Secundarabad	India
18	Shruthi Jillella	LMG-018	December 12, 2022	Rangareddi	India
19	Barakha Gupta	LMG-019	December 25, 2022	Hapur	India
20	Lalit Kumar	LMG-020	December 30, 2022	Dehradun	India
21	N Poornachandra Rao	LMG-021	December 30, 2023	Mangalagiri	India
22	Pooja Rastogi	LMG-022	December 31, 2022	Greater noida	India
23	VIJAY KAUTILYA D	LMG-023	December 31, 2023		India

Senior Advisory Panel [GLOBAL]:

Full Name	Country	Email
Professor Mukesh Yadav	India	drmukesh65@yahoo.co.in
Professor S K Roy Choudhary	India	skrc88@gmail.com
Dr. Carlos Cuadrado Gómez-Serranillos	Spain	fem@peritojudicial.legal
Professor Anil Aggrawal	India	dr_anil@hotmail.com
Dr Vijay Pal Khanagwal	India	drvijaykhanagwal@yahoo.co.in
Dr Rakesh Kumar Gorea	India	gorea_r@yahoo.com
Professor [Dr] Mohammed Nasimul Islam	Malaysia	nasimevu@yahoo.com
Dr George Paul	Singapore	drgeorgepaul@outlook.com
Professor Jawed Ahmad Usmani	India	usmanijawed@rediffmail.com
Professor Vijay Vasudev Pillay	India	drvvpillay@gmail.com
Professor Ritesh George Menezes	Saudi Arabia	mangalore971@yahoo.co.in
Professor Ashok Chanana	India	chananadoctor5690@gmail.com

Members, Global Editorial Board

1. Dr George Paul, Singapore [Coordinator]
2. Dr. Mohamed Saleh Madadin, Dammam, Saudi Arabia
3. Dr. Carlos Cuadrado Gómez-Serranillos, Madrid-Spain
4. Dr. Aboelyazied Ahmed Fouad-Egypt
5. Dr Akram Gabriel Nyok Loul, Juba-South Sudan
6. Dr Anis Ali Abdulkhaleq Amir, Aden-Yemen
7. Professor [Dr] Mohammed Nasimul Islam, UiTM-Malaysia
8. Dr Ritesh George Menezes, Dammam, KSA
9. Dr. Mohd Hakim Hashom, Kuala Lumpur-Malaysia
10. Dr Shubhakar Karra Paul, Bridgetown-Barbados
11. Dr Ahmed Makata Mwinyimtwana, Dar es Salaam-Tanzania
12. Dr Sibte Hadi, Riyadh, KSA
13. Dr Mushtaq Ahmad, Dhaka-Bangladesh
14. Dr Doaa Abdel Wahab El Morsi, Mansoura-Egypt
15. Dr Sujitkumar N Jadhav, Adis Ababa, Ethiopia
16. Dr Vincenzo Agostini, Lombardy, Italy
17. Dr Giuseppina Seppini, Turin, Italy
18. Dr Shahjahan Roustae, Kabul, Afghanistan
19. Dr Gursirat Singh, Dubai, UAE
20. Chapo Lunga, Harare, Zimbabwe
21. Professor [Dr] Shirza Nadeem Faisalabad Pakistan
22. Professor Arturo Barraza Macías, Durango, México
23. Dr Víctor Gutiérrez Olivárez Morelia, Michoacán,
Michoacán
24. Ms Marta Perales Gómez, Madrid, Spain
25. Dr Luis Felipe El Sahili González, Leon México
26. Dr Munawwar Husain, India
27. Alsayed Ahmad Alsayed Alhashmi, Dubai, UAE
28. HariBodhan Joshi, Nepal
29. Borhan uddin ahamed, Bangladesh
30. Ijaz Aziz, Peshawar, Pakistan
31. Dr. Mattia Sicilia, Italy
32. Dr. Ellisabetta Moroni, Italy

Editorial Board Job Description

Position	Common tasks
Editor-in-Chief & Assistant Editor in Chief	General oversight and responsibility for the journal. May include reviewing manuscripts, suggesting reviewers, publishing the journal, promotion etc.
Advisory Panel	To give advice and recommendations to modify journal policies and solution of day to day problems faced by journal.
Editor (Associate, Section)	Reviews manuscripts, makes recommendations. Locates peer reviewers.
Copyeditor	Edits papers for clarity, adherence to style guide.
Layout Editor	Formats paper for publication (e.g., typesetting, different formats, HTML etc.)
Managing Editor	Oversees the journal's daily activities. Ensures submissions stay on track.
Coordinator Editorial Assistant	To coordinate with all the assistant editors and reporting the progress to Managing Editor
Editorial assistant	Tasks as needed.
Webmaster	Maintains website, updates with changes etc.
Proofreader	Checks the final article for errors before publication.
Advisory Board	Consulted as needed by journal on policies, etc.
Coordinator, Reviewer Panel	To coordinate with the reviewers to motivate them subsequently catalyzing the manuscript review process, to monitor the time of review process taken by stakeholder
Member Review Board	To review the manuscript

Associate Editors [International]

Dr George Paul

Chairman, International Associate Editors, IJMJ
Branch Director & Senior Consultant Forensic Pathologist-
UG Medical Director-Forensic Medicine YLL School of Medicine,
NUS, Sr Lecturer- LKC School of Medicine Singapore
Forensic Medicine Division, Health Sciences Authority.
Southaven, Singapore

Email: [Click here to Contact directly via email](#)

Dr Vincenzo Agostini

Adjunct Professor
Department of Sciences and Technological Innovation
University of Eastern Piedmont, Piedmont, Italy

Email: [Click here to Contact directly via email](#)

Dr Syed Sibte Hadi

Professor of Forensic Genetics & Medicine
Naïf Arab University for Security Sciences
Riyadh, Saudi Arabia

Email: [Click here to Contact directly via email](#)

Dr Ahmed Makata Mwinyimtwana

Senior Lecturer in Forensic Medicine
Medical Faculty, Department Pathology
Kampala International University in Tanzania
Dar es Salaam, Tanzania

Email: [Click here to Contact directly via email](#)

Prof. Dr. Ritesh George Menezes,

Professor, Imam Abdulrahman Bin Faisal University,
Dammam, Saudi Arabia

Email: [Click here to Contact directly via email](#)

Dr. Mohd Hakim Bin Hashom

Databank DNA Division (D13), Criminal Investigation Department
(CID),

Royal Malaysia Police (RMP)

Bukit Aman, Kuala Lumpur, MALAYSIA

Email: [Click here to Contact directly via email](#)

Professor [Dr] Mohammed Nasimul Islam

Professor and Senior Consultant Forensic Pathologist

Faculty of Medicine,

Universiti Teknologi MARA,

Sungai Buloh Campus, Jalan Hospital,

Selangor, Malaysia Forensic Consultant, Sg. Buloh Hospital,

Selangor, Malaysia.

Email: [Click here to Contact directly via email](#)

Dr Rijen Shreshtha

Forensic Expert, Commission of Investigation on Enforced

Disappeared Persons, Kathmandu, Nepal

Ex-Chairperson, Medico-Legal Society of Nepal

Email: [Click here to Contact directly via email](#)

Dr Karra Paul Shubhakar

Forensic Pathologist. Forensic Sciences Centre

Bridgetown, Barbados

Email: [Click here to Contact directly via email](#)

Dr Alsayed Ahmad Alsayed Shubber Alsayed Majed Alhashmi

Emirati

Director of Forensic Medicine Department. Dubai Police

Dubai, United Arab Emirates

Email: [Click here to Contact directly via email](#)

Professor Doaa Abdel Wahab El Morsi,

Professor of Forensic Medicine & Clinical Toxicology

Member of Medical Education Department

Mansoura Faculty of Medicine &

Head of Medical Education Department, Faculty of Medicine
Delta University of Science and Technology, Mansoura, Egypt

Email: [Click here to Contact directly via email](#)

Professor Dr Borhan Uddin Ahamed

Professor and Head of Forensic Medicine & Toxicology,

Monno Medical College, University of Dhaka,

Manikganj, Bangladesh.

Email: [Click here to Contact directly via email](#)

Dr Akram Gabriel Nyok

MBBS, MSc, DLM

Forensic Medicine Specialist

Head, Department of Forensic Medicine and Toxicology

University of Juba, South Sudan

Email: [Click here to Contact directly via email](#)

Dr. Mattia Sicilia

GSC Chemicals & Advise Lab., Via Milano 56,

Olgiate Comasco (CO), Italy

Email: [Click Here for Email](#)

Dr Michela Maria Guarino

GSC Chemicals & Advise Lab., Via Milano 56,

Olgiate Comasco (CO), Italy

Email: [Click here for email](#)

Associate Editors [INDIA]

Dr. Vijay Pal Khanagwal

Chairman, National Associate Editors, IJMJ
Professor & Head,
Department of Forensic Medicine & Toxicology,
Kalpana Chawla Government Medical College, Karnal (Haryana)
Medicolegal Advisor to Government of Haryana, INDIA

Email: [Click here to Contact directly via email](#)

Professor [Dr] Pooja Rastogi

Professor and Head
Department of Forensic Medicine & Toxicology
School of Medical Sciences & Research
Sharda University, Greater Noida, U.P. 201301

Email: [Click here to Contact directly via email](#)

Dr Pragnesh B. Parmar

Department of Forensic Medicine and Toxicology
All India Institute of Medical Sciences (AIIMS), Bibinagar
Hyderabad Metropolitan Region (HMR) - 508126, Telangana, India

Email: vicepresident@glafims.org , [Click here to Contact directly via email](#)

Dr Ashok Chanana,

Professor and Head ,
Department of Forensic Medicine and Toxicology,
Chintpurni Medical College, Bungal, Pathankot.

Email: [Click here to Contact directly via email](#)

Dr. Mohammad Kaleem Khan

Associate Professor
Department of Forensic Medicine & Toxicology
Aligarh Muslim University, Aligarh
Email: [Click here to Contact directly via email](#)

Dr. Cyriac Job

Professor of Forensic Medicine;

Mount Zion Medical College, Chayalode , Adoor, Kerala

Email: [Click here to Contact directly via email](#)

Professor [Dr] Lalit Kumar

Vice-Principle, Professor & Head, Medico-Legal Expert

Department of Forensic Medicine and Toxicology

SGRRIM&HS Patel Nagar, Dehradun, Uttaranchal, INDIA 248001.

Chairman- Medicolegal Cell, HFH

President (W), NMO Uttarakhand State &

VP, Hemophilia Society, Dehradun Chapter

Member of IAFM, IIEMS, UMC, IMA, DMC, MCI, MCUP, SPIC, PAFMAT

Email: [Click here to directly contact via email](#)

Professor [Dr] Manish Kumath

General Secretary, IAFM &

Professor (Forensic Medicine)

VMMC & Safdarjung Hospital, New Delhi, India

Email: [Click here to directly contact via email](#)

Professor [Dr] Putul Mahanta

MD, PhD

Professor of Forensic Medicine,

Assam Medical College, Dibrugarh, Assam, India

Email: [Click here to directly contact via email](#)

Dr Richa Gupta

Associate Professor and Head,

Department of Forensic Medicine

Sarojini Naidu Medical College, Agra

Email: assistanteditor@ijmj.net [Click here to Contact directly via email](#)

Dr . Pooja Chakraborty

Head of Department,
Department of Forensic Science and Criminology,
Annai Fathima College of Arts and Science,
Madurai , Tamil Nadu, INDIA
Email: [Click here to Contact directly via email](#)

Dr. Abhishek Das

Associate Professor & Head of Department
Forensic Medicine & Toxicology,
Calcutta National Medical College.
Government of West Bengal
Email: [Click here to Contact directly via email](#)

Dr Tanuj Kanchan

Professor & Head (Forensic Medicine & Toxicology)
Basni Industrial Area, Phase-2, Jodhpur 342005, INDIA.
E-mail: [Click for Email](#)

Professor (Dr.) Sanjay Gupta

Dean (Examination)
Professor and Head, Department of Forensic Medicine and Toxicology,
All India Institute of Medical Sciences (AIIMS), Rajkot, Gujarat
(India)
Email: [Click here for Email](#)

Coordinator, Editorial Assistance**Dr Richa Gupta**

Associate Professor and Head,
Department of Forensic Medicine

Sarojini Naidu Medical College, Agra

Email: assistanteditor@ijmj.net [Click here for Contact email](#)

Editorial Assistance	
1. Assistant Editor [Copyeditor]	Dr Suraj Sundaragiri
2. Assistant Editor[Layout Editor]	Dr Seema Sutay
3. Assistant Editor[Designer]	Dr Richa Gupta
4. Assistant Editor [Funding Coordinator]	Ms Roma Khan
5. Assistant Editor [Indexer]	Dr Yatiraj Singi
6. Assistant Editor [Webmaster]	Dr Kamran Sabri
7. Assistant Editor [Marketing & Sales]	Mr S. Jaun Rizvi
8. Assistant Editor [Proofreader]	Dr Richa Choudhury
9. Assistant Editor Quality:	Dr.Pooja Chakraborty
10. Assistant Editor, Ethics	Dr Abhishek Das
11. Assistant Editor, Plagiarism Detection	Dr R Sridhara Chary
12. Assistant Editor, Reference & Citation	Dr B. Vasanth Naik
13. Assistant Editor, Copyright & Authorship	Dr Nandam Poornachandra Rao
14. Assistant Editor, Reprints	Dr Barakha Gupta
15. Assistant Editor, ISSN	Dr Chaitanya Mittal
16. Assistant Editor, DOI	Dr Anuj Gupta
17. Assistant Editor, DOAJ	Dr Alsayed Ahmad Alsayed Alhashmi
18. Assistant Editor, Sections	Dr Anis Ali Abdulkhaleq
19. Assistant Editor, Subscriptions	Dr Doaa Abdel Wahab El Morsi
20. Assistant Editor, Translation	Marta Perales Gómez
21. Assistant Editor, Records	Dr Mohammad Kaleem Khan
22. Production Editor	Dr Richa Choudhury
23. Subscription Manager	Mr Hakan YILDIZ

Coordinator, Reviewers Panel:**Dr . Pooja Chakraborty**

Head of Department,

Department of Forensic Science and Criminology,

Annai Fathima College of Arts and Science,

Madurai , Tamil Nadu, INDIA

Email: reviewerpanel@ijmj.net [Click here to Contact directly via email](#)

Expert Reviewers Panel:

Name of Reviewer	Subject Responsivities
Dr Vincenzo Agostini	Forensic Biology and Genetics
Dr Anis Amir	General Topic and Manuscript Suitability
Dr Imran Sabri	Forensic DNA
Dr Syed Sibte Hadi	Forensic Genetics & Medicine
Dr. Vijay Pal Khanagwal	Forensic Medicine & Toxicology Medical Education
Dr A. MAKATA Mwinyimtwana	Forensic Medicine
Prof. Dr. Ritesh George Menezes	Forensic Medicine and Article Quality
Professor V. V. Pillay	Medical Toxicology
Dr Richa Gupta	Forensic Medicine & Toxicology
ACP Ts. DR. MOHD HAKIM BIN HASHOM	Databank DNA Division (D13), Criminal Investigation
Dr. Pragnesh Parmar	Forensic Medicine & Toxicology
Dr George Paul	Forensic Pathology, Allied Health Sciences, Forensic Medicine
Dr Suraj Sundaragiri	Forensic Medicine & Toxicology
Dr . Pooja Chakraborty	Forensic Science and Criminology
Dr Chaitanya Mittal	Forensic Medicine & Toxicology
Ms Roma Khan	Manuscript Sequence of Publication

Coordinator, Reviewers Panel:**Dr . Pooja Chakraborty**

Head of Department,
Department of Forensic Science and Criminology,
Annai Fathima College of Arts and Science,
Madurai , Tamil Nadu, INDIA
Email: reviewerpanel@ijmj.net [Click here to Contact email](#)

International Peer Review Panel

1. Dr George Paul, Singapore [Coordinator]
2. Dr. Carlos Cuadrado Gómez-Serranillos, Madrid-Spain
3. Dr. Aboelyazied Ahmed Fouad-Egypt
4. Dr Akram Gabriel Nyok Loul, Juba-South Sudan
5. Dr Anis Amir, Aden, Yemen
6. Professor [Dr] Mohammed Nasimul Islam, UiTM-Malaysia
7. Dr Ritesh George Menezes, Dammam, KSA
8. Dr. Mohd Hakim Hashom, Kuala Lumpur-Malaysia
9. Dr Shubhakar Karra Paul, Bridgetown-Barbados
10. Dr Ahmed Makata Mwinyimtwana, Dar es Salaam-Tanzania
11. Dr Sinte Hadi, Riyadh, KSA
12. Mr Hakan YILDIZ, Istanbul, Turkey
13. Dr Mushtaq Ahmad, Dhaka-Bangladesh
14. Dr Anis Ali Abdulkhaleq Amir, Aden-Yemen
15. Dr Doaa Abdel Wahab El Morsi, Mansoura-Egypt
16. Dr Sujitkumar N Jadhav, Adis Ababa, Ethiopia
17. Dr Giuseppina Seppini, Turin, Italy
18. Dr Shahjahan Roustae, Kabul, Afghanistan
19. Dr Gursirat Singh, Dubai, UAE
20. Chapo Lunga, Harare, Zimbabwe
21. Professor [Dr] Shirza Nadeem Faisalabad Pakistan
22. Professor Arturo Barraza Macías, Durango, México
23. Dr Víctor Gutiérrez Olivárez Morelia, Michoacán, Michoacán
24. Ms Marta Perales Gómez, Madrid, Spain
25. Dr Luis Felipe El Sahili González, Leon México

Coordinator, Reviewers Panel:

Dr . Pooja Chakraborty

Head of Department,
Department of Forensic Science and Criminology,
Annai Fathima College of Arts and Science,
Madurai , Tamil Nadu, INDIA

Email: reviewerpanel@ijmj.net [Click here to Contact directly via email](#)

National Peer Review Panel

Dr Animesh Pathak Patiala	Dr Amit Kumar Singh Lucknow
Dr Chethi Rohith Sai Noida	Dr Jakkam Surendar Warangal
Dr Jitendra Kumar Delhi	Dr Tariq Wali Mathura
Dr Souven Roy Sankrail	Dr Shaik Shavukath Ali, Vishakhapatnam
Dr Sumit Kumar Madhubani	Dr Sadineni Mounika Hyderabad
Dr Haricharan.A Imphal	Dr Ramathoti Lakshmi Venkata, Chennai
Dr Haresh Yadav Amreli	Dr Kumaran M, Puducherry
Dr C.Manohar Chennai	Dr Dileep Kumar R Tumkur
Dr Vinod Vamsi Kira, Vizianagaram	Dr Vishal Sharma Lucknow
Dr Arun Kumar Gupta Bhadohi	Dr Ranvir Ranjan Patna
Dr Somshekhar Sharma Udaipur	Dr Ranvir Ranjan Patna
Dr Ranjit Immanuel James Vellore	Dr Sandeep Sitaram Kadu Ahmednagar
Dr Anupam Kumar Bansal Bhilwara	Dr Bharath Kumar Guntheti, Khammam
Dr Sunil Kumar Duchania New Delhi	Dr Vinny Sharma Greater Noida
Dr Sachin Mittal Delhi	Dr Kajol Bhati Greater Noida
Dr Aditya Madhab Baruah Tezpur	Dr Ashutosh Baliram Potdar Kolhapur
Dr Rajendra Kulhari Bikaner	Dr Lavanya Kowsil Medchal District
Dr Yatiraj Singi Bilaspur	Dr K Rajesham Karimnagar
Dr Arpan Kumar Pan Puducherry	Dr Krishna Nishad Lucknow
Dr Kanika Kohli Ambala	Dr Krishna Nishad Lucknow
Dr Ajay Parkash Delhi	Dr Jagdeep Jadav Himmatnagar
Dr Pankaj Prajapati Vadodara	Dr Reshma Talukdar Shillong
Dr Navpreet Kaur Amritsar	Dr Rajiv Joshi Faridkot
Dr Mary Sowjanya Gaddala Hyderabad	Dr Dharmendra B. Sharma Pune
Dr Sanjay Kumar New Delhi	Dr Vineet V Sinnarkar Pune
Dr Mohith S Yadav Mangalore	Dr Uma Adhikari Inphal
Dr Vishwajeet Singh Ghaziabad	Dr Sourav Bhowmik Jodhpur
Dr Mainak Tarafder Kolkata	Dr Mohan N Pawar Loni
Dr Praveen Kumar Pradhan Cuttack	Dr Satish K Verma Delhi
Dr Naveen Kumar Jhalawar	Dr Amandeep Singh Chandigarh
Dr Leena Bhardwaj Gurugram	Dr M.A.S Ananthan Mangalore
Dr Arijit Datta Karamsad	Dr Aashi Verma Deralakatte
Dr Hitesh Chawla Nuh- Haryana	Dr Gunti Damodar Hyderabad
Dr Vijay Kautilya Jamshedpur	Dr Sundeep Ingale Nagpur
Dr Rakesh Kumar Gorea Ram Nagar	Dr Parkhe Shivnath Nivrutti Ahmednagar
Dr Deepthi S. Calicut	Dr P S Sanjay Manjeri
Dr B Rupesh Kumar Naik Tirupati,	Dr Nitin Verma Delhi
Dr Ravindra Kumar C N, Bangalore	Dr Swati Goyal Jaipur
Dr Ambreen Ejaz Kolkata	Dr Abraham Johnson Gujarat
Dr P.Chandrasekar Chennai	Dr Vipin Bhandari Ambala, Haryana
Dr Kurna Sadhakrishna Varma,Nizamabad	Dr Surendra Kumar Pandey Varanasi
Dr Pratik Rameshbhai Varu Rajkot	Dr Naveen A Bhubaneswar
Dr Abdul Rahman Omer Hydreabad	Dr Dayanand G Gannur Bijapur
Dr G. Deva Raju Secunderabad,	Dr Oinam Gambhir Singh, Chengalpattu
Dr Mukul Sharma Kota	Dr Ashok Nagaraj Puducherry
Dr Shankar M Bakkannavar Manipal	Dr Karthi Vignesh Raj K New Delhi

Dr Abdul Raoof Mp New Delhi	Dr Mrityunjay Singh Tomar Bhopal
Dr Cherian Philemon Kurian Mumbai	Dr Biplab Rath Bhubaneswar
Dr Kuldeep Panday Pratapgarh	Dr Raviraj Kg Bangalore 560049
Dr Sukhdeep Singh Gurdaspur	Dr Shobhana S S Bangalore
Dr Rajesh, Puducherry	Dr Vinay J Mysuru
Dr Preet Mohinder Singh Jammu	Dr Soreingam Apam Imphal
Dr Rajeev Kumar Greater Noida	Dr Tapas Kumar Bose, Kolkata
Dr Sandeep Vishnu Binorkar Jalgaon	Dr Ambreen Ejaz Kolkata
Dr Jagadish Rao P P Mangalore	Dr Kusa Kumar Shaha Pondicherry
Dr Angayarkanni.S Chennai	Dr Ankita Kakkar, Noida
Dr Shruthi Jillella Hyderabad	Dr Daniel Manoj, Vellore, Tamil Nadu
Dr Seema Sutay Khandwa	Dr Fremingston Marak Pondicherry
Dr Hema Sundar Pydi Srikakulam	Dr Latif Rajesh Johnson Vellore
Dr Ramalingam S, Chennai	Dr Nirjhar Saha Kolkata
Dr Abhinandana R Kolar	Dr Suresh Kumar Dhatarwal Rohtak
Dr Dd Pravin Jayram Tayade Sagar	Dr Senthil Kumaran M Vijayawada
Dr Mp Pradeep Kumar Bangalore	Dr Sweta H Patel Vadodara
Dr G Chandra Deepak Hyderabad	Dr Venkatesh J Delhi
Dr Sneha Yadav New Delhi	Dr Pratik V Tarvadi Gandhinagar
Dr Manpreet Kaul Amritsar, Punjab	Dr Kumar Shubhendu Dhanbad
Dr P. Ishwarappa. Inamadar, Karwar	Dr Surendra Singh Naini, Allahabad
Dr Ajit Malani Udaipur	Dr Sneha Yadav New Delhi
Dr Uma Maheswra Rao. P. Kakinada	Dr Priyanka Chhabra New Delhi
Dr Sunilkumar S Biradar Hubli	Dr Shivakumar P Karaikal
Dr Mohd Liyaqat Shareef, Hyderabad	Dr Mousumi Sen Vellore
Dr A . Shankar Rao Vijayawada	Dr A.Harishchandra Waghmode, Ratnagiri
Dr Baishwanar Banerjee, Bhubaneswar	Dr Arun Pinchu Xavier, Marthandam
Dr Anita Yadav Greater Noida	Dr Dev Ashis Ramu Damu, Gangtok
Dr Moga Hemal Kamleshbhai, Bhavnagar	Dr Hari Prasad V Chennai
Dr Surendra Kumar Pandey Varanasi	Dr Raghavendra R Bengaluru
Dr Risha Jasmine Nathan Greater Noida	Dr Deepak Kumar New Delhi
Dr J. James Rajesh, Puducherry	Dr Mrinal Kanti Jha Kolkata
Dr Nt Satish Tumkur	Dr Ashish Kumar Singh, Prayagraj
Dr Appam . Shankar Rao Vijayawada	Dr Khushali Joshi, Kolkata
Dr Rajkumar M G Kolar	



Editorial Board Membership Terms

International Journal of Medical Justice, IJMJ
[Official Publication of GLAFIMS ACADEMY]

The acceptance of the following terms and conditions confirms your appointment as a member on the Editorial Board of the Journal International Journal of Medical Justice [IJMJ] (henceforth called "the journal").

Below are the roles and responsibilities of the Editorial Board Members:

1. All members of the Editorial Board are mandatorily required/expected to maintain highest level of confidentiality as per prevailing standards of the assigned tasks. Any violation in this rule may subject to termination of the membership without any notice/information.
2. Your appointment is initially for three (3) years, from the date this Agreement is signed, and may be renewed for up to three (3) additional years if both parties are content to continue the membership. However Editor-in-Chief/Editor reserves the right to modify this clause without notification.
3. The role as an Editorial Board Member is an honorary one and no payment is offered for completion of the responsibilities of the Editorial Board Members. However Editor-in-Chief/Editor reserves the right to modify this clause without notification.
4. Editorial Board Members are required to conduct at least two (2) reviews for each issue of the journal (the journal is published biannually in June and December). This equates to a minimum of four reviews a year. Reviews are to be completed within 30 calendar days

of the review request. However Editor-in-Chief/Editor reserves the right to modify this clause without notification.

5. Reviewers will be expected, in reviewing submissions, to abide to the editorial policy of the journal. However Editor-in-Chief/Editor reserves the right to modify this clause without notification.
6. Editorial Board Members are expected to promote the journal where possible and provide input and direction to further build and develop the journal.
7. A key aspect of your appointment will involve the mentoring of emerging Journal who may need assistance in developing their research into a publishable paper. As an Editorial Board Member, you are required to mentor, or facilitate the mentorship, of at least one author for each issue of the journal. This equates to a minimum of two mentoring roles per year. However Editor-in-Chief/Editor reserves the right to modify this clause without notification.
8. Mentoring of authors entails one-on-one contact with the authors and assistance with research methodologies, the style and structure of research papers, the language used, and any other assistance an author might require in order to publish their paper in the journal. However Editor-in-Chief/Editor reserves the right to modify this clause without notification.

You are expected to successfully complete the term as stated in this agreement but circumstances could result in early termination. This agreement may be terminated at any time based on following conditions:

- 1) By your written notice twelve (12) months prior to termination.
- 2) By mutual agreement between you and the journal committee with less than twelve (12) months' notice.
- 3) By the journal committee, with written notice of twelve (12) months' notice, unless:
 - a) You fail to satisfactorily perform your duties;
 - b) The financial status of the journal changes;
 - c) The journal is forced to dissolve.
 - d) You have not subscribed the journal.
 - e) You are not available on prescribed means of communication as per journal policy statement.

- f) Any violation of "Journal Policy Statement". Which may be updated time to time without notification.
- 4) By Editor-in-Chief/Editor without notice/information
 - a) Any violation of KFU Bylaws
 - b) Any breach of confidentiality agreement.
 - c) Any misbehaviour which is considered not acceptable as per vision of the Editor-in-chief/Editor
 - d) Damaging of any journal property

Correspondence:

Dr Imran Sabri

Editor-in-Chief/Editor

International Journal of Medical Justice

Email: imransabri@gmail.com

Address:

G-1, Ground Floor, City Center, Medical Road,
Aligarh 202002 India

E-Mail:

editor@ijmj.net [Journal]

editor.ijmj@gmail.com, [Editor]

glafims@gmail.com [GLAFIMS ACADEMY]

Website of Journal: www.ijmj.net

Website of GLAFIMS: www.glafims.org [Organization]

Live Membership: www.glafims.com



OpenAIRE ICMJE INTERNATIONAL COMMITTEE of
MEDICAL JOURNAL EDITORS



International Journal of Medical Justice



Official Publication of GLAFIMS ASSOCIATION

An international peer and expert reviewed journal in the service Of Forensic Medicine, Forensic Toxicology, Forensic Science and Allied Forensic Sciences

Email: editor@ijmj.net Web: <https://www.ijmj.net>

Authors Agreement Form, IJMJ

Undertaking

I/We the undersigned declare that this manuscript titles is original, has not been published before and is not currently being considered for publication elsewhere.

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed.

We further confirm that the order of authors listed in the manuscript has been approved by all of us.

We understand that the Corresponding Author is the sole contact for the Editorial process. He/she is responsible for communicating with the other authors about progress, submissions of revisions and final approval of proofs.

Signature:

Name:

Date:

Place:

Signature:

Name:

Date:

Place:

Editorial Office:

G-1, City Center, Medical College Road, Aligarh 202001 UP, INDIA
Email: glafims@gmail.com web: www.glafims.org Mobile No: 0091-9897830036

International Journal of Medical Justice



Official Publication of GLAFIMS ASSOCIATION
An international peer and expert reviewed journal in
the service Of Forensic Medicine, Forensic Toxicology,
Forensic Science and Allied Forensic Sciences
Email: editor@ijmj.net Web: <https://www.ijmj.net>

Table of Content

Volume 1, Issue 1, Year 2023

January -June 2023

Date of Publication: Sunday January 15, 2023

Date of Online Availability: Thursday January 26, 2023

Content list Available at <https://www.ijmj.net/archive/2023>

Journal Homepage: <https://www.ijmj.net>



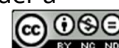
OpenAIRE ICMJE INTERNATIONAL COMMITTEE of
MEDICAL JOURNAL EDITORS



S. No	Title and authors	Type	Corresponding Author	Page No.
1	From the Desk of Editor in Chief Birth of new journal dedicated to serve medical justice system, IJMJ Imran Sabri.	Editorial	Dr Imran Sabri	1-2
2	Job and social problems due to morphine positivity: abuse or food contamination? Mattia Sicilia, Michela Maria Guarino, Elisabetta Moroni, Vincenzo Agostini.	Original	Dr Vincenzo Agostini	3-22
3	Art of Parenting vs Parental Child Abuse - Choose a Right Path Pragnesh Parmar, Gunvanti Rathod.	Review	Dr Pragnesh Parmar	23-26
4	A Fatal Case of ruptured carotid aneurysm A. Haricharan, Soibam Neha, Asho Angami, Lourembam Frieny, Th. Meera Devi.	Case Report	Dr Haricharan A	27-31
5	The POCSO ACT 2012 : Stop the Abuse , Stop the Cruelty , Stop the Slaughter ! Perumal P, Ravindra S Honnunar, Lakshmibharathi M.	Review	Dr Perumal P	32-48
6	A roadmap for saviors: role of doctors in medicolegal care in relation to POCSO ACT Dhananjay Kumar, Satish Kumar Khalkho, S.K. Pandey.	Review	Dr Dhananjay Kumar	49-57

Copyright (c) 2023 International Journal of Medical Justice, IJMJ. This work is licensed under a

[Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.](https://creativecommons.org/licenses/by-nc-nd/4.0/)



Editorial Office:

G-1, City Center, Medical College Road, Aligarh 202001 UP, INDIA
Email: glafims@gmail.com web: www.glafims.org Mobile No: 0091-9897830036

From the Desk of Editor in Chief

Birth of new journal dedicated to serve medical justice system, IJMJ

DOI: <https://doi.org/10.5281/zenodo.7536769>

Citation: Imran Sabri. (2023). From the Desk of Editor in Chief. International journal of medical justice, 1(1), 1-2. <https://doi.org/10.5281/zenodo.7536769>

International Journal of Medical Justice, IJMJ is an official publication of GLAFIMS ACADEMY. GLAFIMS is abbreviation of the Global Academy of Forensic and Investigative Medicine and Science. This is a collection of likeminded people involved in Forensic Medicine, Forensic Sciences, Investigative Forensic Medicine, Law Persons, Investigative Authorities and Persons, Forensic Pathologists, and allied sciences. The Main aim of the association is to collaborate and cooperate with each other for the academic and professional development by enhancing mutual interactions. GLAFIMS Association is registered with Government of India.

At present, International Journal of Medical Justice [IJMJ] publishes two issues per year in June [January-June Issue] and December [July-December Issue]. Special Issues of the journal publication may be published based on the collective wisdom of the Editorial Board. The Editor-in-Chief/Editor reserves the right to notify the proceeding of the Editorial Board. The International Journal of Medical Justice [IJMJ] publishes original research, peer-reviewed observational, experimental, and clinical studies, meta-analyses, review articles, case reports and invited reviews in the fields of medicine and allied subjects. Apart from this journal also entertains conference paper, unpublished data, letter to the editor etc subject to being accepted by the editorial board. Papers deemed accepted for publication must meet all the criteria of originality, priority, scientific actuality. All the submitted papers will go through rigorous review process.

All the manuscript will be returned to the corresponding author in case not following the submission guidelines even without reviewing. The decision of Editor in Chief, IJMJ will be final in all respects. Editor in Chief/Editor reserves the right to reject the manuscript if they are of the opinion that the paper is not suitable for the publication/review.

The International Journal of Medical Justice, IJMJ aims to provide a common platform for publishing/sharing good quality of research in the field of Forensic Medicine, Investigative Medicine, Medical Toxicology, and allied specialties such as Law, Justice, Nursing Sciences etc. The focus thus shall primarily be toward Medical Justice.

Medical Justice consists of two terms medical sciences and criminal justice administration. It's a collaborative concept between medicine, science and law. The various medicine and science specialties which are more often applied to facilitate the legal as well as the criminal justice administration are broad focus of medical justice.

Forensic Medicine is application of medicine in the court of law, similarly, any part of medical science or science which is applied to facilitate the legal system comes under the category of medical justice. Allied forensic medicine and science specialities include Law and Justice, Forensic Nursing etc are part of Medical Justice System.

Very often it is difficult to separate out these specialities which work with each other side by side to facilitate the criminal justice administration system. In this journal we will mainly publish that which is directly or indirectly around the philosophy of "Medical Justice".

The International Journal of Medical Justice [IJMJ] will publish original research, peer-reviewed observational, experimental and clinical studies, meta-analyses, review articles, case reports and invited reviews in the fields of Forensic Medicine, Forensic Sciences, Investigative Forensic Medicine, Law Persons, Investigative Authorities and Persons, Forensic Pathologists and allied sciences.

As per policy of the International Journal of Medical Justice, IJMJ we follows the ICMJE's Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and have voluntarily adopted policies prepared by the WAME Ethics and Policy Committee (formerly the Publication Ethics and Editorial Policy Committees).

As signatory of BOAI20: THE BUDAPEST OPEN ACCESS INITIATIVE Declaration, IJMJ is committed to open access by supporting institutional self-archiving and/or open-access-journals.

Dr Imran Sabri, MD FRCP Edin

Editor in Chief

International Journal of Medical Justice, IJMJ

Email: editor.ijmj@gmail.com, editor@ijmj.net

Affiliation:

Forensic Medicine Division,

Department of Bio-Medical Sciences,

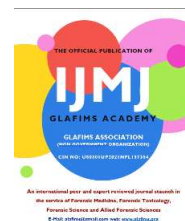
College of Medicine, King Faisal University, Al-Ahsa.

Email: ikhan@kfu.edu.sa, imransabri@gmail.com



Content list Available at ijmj.net
**International Journal of
Medical Justice**

Journal Homepage: <https://www.ijmj.net>



Original Research

Job and social problems due to morphine positivity: abuse or food contamination?

Mattia Sicilia*, Michela Maria Guarino*, Elisabetta Moroni.**, Vincenzo Agostini***.

* GSC Chemicals & Advise Lab., Via Milano 56, Olgiate Comasco (CO), Italy

** Department of Biology and Biotechnology "L. Spallanzani", University of Pavia, Via Ferrata 9, Pavia, Italy

*** Adjunct Professor, Department of Sciences and Technological Innovation, University of Eastern Piedmont, Alessandria, Italy

Article History:

Date of Submission: Tuesday November 1, 2022

Date of Revision: Saturday November 13, 2022

Date of Acceptance: Saturday November 20, 2022

Date of Publication: Sunday January 15, 2023

Digital Object Identifier [DOI]: <https://doi.org/10.5281/zenodo.7536800>

Available Online: Thursday January 26, 2023

Website Archive: <https://www.ijmj.net/archive/2023/1/1/IJMJ-2023-11.pdf>

Citation: Mattia Sicilia, Michela Maria Guarino, Elisabetta Moroni, & Vincenzo Agostini. (2023). Job and social problems due to morphine positivity: abuse or food contamination?. International journal of medical justice, 1(1), 3-22. <https://doi.org/10.5281/zenodo.7536800>

Indexing: Indexed in [OpenAIRE](#)

Keywords: Bread and Poppy Seeds, Morphine, GC-MS, Food Contamination, Job placement and Social Life.

Academic Editors: Dr Pragnesh Parmar, Dr Lalit Kumar

Correspondence:

Dr Vincenzo Agostini

Adjunct Professor

Department of Science and Technological Innovation,

University of Eastern Piedmont, Via Teresa Michel 11, Alessandria, Italy

Email: vincenzo.agostini@hotmail.it

Copyright © 2023 by GLAFIMS ASSOCIATION. All rights reserved.

Abstract:

Objective: After alcohol, opium is most likely the second substance that humans have been using for the longest time for its psychoactive effects: for example, morphine has the ability to decrease pain sensitivity even at small doses. The prolonged use of these substances with analgesic-narcotic action (of natural and synthetic origin), both for medical and pleasure use, causes addiction/dependence and thus is regulated by specific laws.

In Italy, in order to maximize toxicological controls, employees of public administration or private companies are subjected to constant toxicological analyses. When a worker tests positive for a certain illicit substance, they are temporarily relieved of the assignment, destined for therapeutic paths at drug addiction medical services and, in extreme, fired.

The present work wants to focus the attention on an increasingly growing and widespread problem, concerning the positivity of subjects for opiate substances, especially morphine, not as the result of illicit use/abuse but due to an involuntary intake via food, such as ingesting poppy seeds.

For this purpose, the study first describes a real case of a worker

positivity for morphine related to ingestion of bread with poppy seeds that, subsequently, gave the basis for a university research program.

Materials and Methods: During the research breads with poppy seeds were consumed by twenty-two healthy subjects of both sexes (eight women and fourteen men), having different physical characteristics and lifestyles and aged between 25-73 years old. Their urine samples were tested with the classical GC/MS methods searching for opiates. Poppy seeds, manually shredded, were also subjected to toxicological analysis to verify the presence or the absence of opiates.

Results and Conclusion: The results obtained confirmed that the positivity of the subjects to morphine was not due to an abuse of the substance itself (or heroin), but from food contamination.

Keywords: Bread with Poppy seeds; Morphine; GC-MS; Food contamination; Job placement and social life.

HIGHLIGHTS

- Employees positive for morphine following toxicological analyses on workplace;
- Social and working problems for workers who tested positive

during forensic toxicological analyses;

- Commercial bread with poppy seed consumption may cause the presence of morphine in urines;
- Positivity for drugs can be also due to accidental food contamination.

Introduction: Opiates and their metabolism *Papaver somniferum* L. is an angiosperm dicot in the family *Papaveraceae*. It is an annual plant, mainly cultivated in the northern hemisphere. Its glaucous leaves have an elliptical shape, with lobed or dentate margins, & present an alternate arrangement [1].

According to manuscripts dated to about 5000 BC, opium was used and cultivated by Sumerians, the inhabitants of the ancient Mesopotamian region that corresponds to current Iraq and Kuwait [2]. Later, ancient Greeks called it "ὀπlov" (opium) and the name remained unchanged over time [3-7].

There is a lot of literature about opium poppy cultivation, chemical features, medical usage and the wars for its trade [2,8-17]. The word "opium" comes from the ancient Greek and means "juice" [1]. Indeed, it is the lactescent exudate of the immature seed capsule of *Papaver somniferum* and

it can be collected by cutting the plant.

Dried opium contains about 25% of alkaloids and 10% of morphine [3,14].

After alcohol, opium is most likely the second substance that humans have been using for the longest time for its psychoactive effects: for example, morphine has the ability to decrease pain sensitivity even at small doses [1,18]. The prolonged use of these substances with analgesic-narcotic action (of natural and synthetic origin), both for medical and pleasure use, causes addiction.

In the last two centuries opium abuse, via oral assumption or smoke, was very common. However, after the discovery of the active principle of morphine (in 1803) and the subsequent legal restrictions [3], opium assumption decreased drastically. As a counter effect, the abuse of synthetic morphine-like substances took hold in occidental industrialized countries.

Morphine is widely considered the prototype of drugs with narcotic-analgesic action and it is the standard used for comparison with other painkillers [19].

Like other alkaloids, morphine has a high affinity for δ , κ and μ opioid receptors [20]. Most of the analgesic effect is due to its

binding to the latter in central nervous system (CNS) and peripheral nervous system (PNS) [21]. As a result, the descending inhibitory pathways of CNS activate and signal transmission in afferent nociceptive neurons of PNS is inhibited. This leads to the decrease of overall nociceptive signal transmission that manifests through analgesia, sleepiness, mood changes and mental confusion. Moreover, morphine is a powerful respiratory depressant [3]. The molecule is poorly soluble in water, while it has a high affinity for both acid and basic solutions (respectively as a protonate base and as hydroxyl group salt in C3 position). It is usually conserved and utilized in salt form [22,23]. In medical practice, morphine administration can occur orally (PO) or through injection, specifically: intravenous (IV), intramuscular, epidural, or intrathecal injection. Morphine suppositories are also available [24,25]. Morphine maximum concentration in plasma following oral absorption is 5-10 times lower than the one resulting from parenteral administration and it is measurable between 30 and 90 minutes after assumption [22,23,26-29]. This is because first pass effect is strong in case of oral administration and thus the

average bioavailability is 30-40%, even though it can vary a lot (19-47%) [22,26-28].

Despite morphine being poorly lipophilic, it widely distributes in the whole body and its distribution volume varies between 2.1 and 4.0 L/kg [26-28,30,31]. In particular it tends to accumulate in parenchymatous tissues such as lungs, spleen and liver [3,22,26,30,32]. A part of the whole amount of circulating morphine binds to specific plasmatic proteins like albumin and γ -globulins [3,33].

Concerning metabolism, morphine is predominantly glucuronidated in the liver. This phase II reaction increases morphine solubility in water to facilitate its excretion. In particular, about 90% of morphine is converted in metabolites: morphine-3-glucorinide (M3G) (45-55%), the main product, morphine-6-glucorinide (M6G) (10-15%) and other substances in lower percentages [34]. The first pass effect following oral administration of morphine leads to a higher amount of glucuronide metabolites production with respect to other routes of administration and after 75 minutes M3G concentration is maximum [26]. One hour after oral administration, M3G and morphine

ratio is about 25:1 [28]. Morphine-6-glucuronide (M6G) is an active metabolite of morphine and, after a single dose, is detected in plasma in lower concentrations than M3G [26]. M6G binds to opioid μ receptors and it has a stronger analgesic action compared to morphine [35-37]. Moreover, it seems M6G causes less side effects [38,39]. M6G reaches its peak in concentration 45 minutes after intravenous injection and it corresponds to 25% of initial morphine concentration [26]. Instead, in case of oral administration of morphine, M6G maximum concentration is four times higher than the initial drug concentration and their ratio is 2.5-10:1 after multiple doses [3,26].

Furthermore, M6G likely accumulates in central nervous system and is responsible for the increase in power and efficacy of morphine in case of multiple administrations. The half-lives of M3G and M6G are 2-4 hours after intravenous injection and 9-10 hours following oral administration. Both metabolites are eliminated by renal excretion and their half-lives increase in case of renal insufficiency, thus leading to M3G and M6G accumulation following multiple administrations of morphine [40,41].

Heroin is an opioid drug synthesized by A.C. Wright in 1874 by acetylation of morphine [42,43]. After assumption, heroin is rapidly hydrolysed to 6-monoacetylmorphine (6-MAM) and the latter is hydrolysed to morphine. The bond of ester groups causes a structural change that increases lipophilicity of both heroin and 6-MAM [44,45]. As a result, heroin and its metabolite penetrate faster in brain tissue [33,46-48] and this contributes to a stronger pharmacodynamic effect with a much more rapid onset compared to morphine. Nevertheless, since opioid receptors are stereospecific, heroin has a lower affinity for them with respect to its metabolites that do not have any conjugates to hydroxyl group in C3 position (like 6-monoacetylmorphine, morphine and morphine-6-glucuronide) [49,50]. Therefore heroin is usually considered as a pro-drug whose action is mainly due to its metabolites [49,51]. After administration through various routes, circulating heroin is hydrolysed to 6-monoacetylmorphine by blood and tissue esterase, in which it accumulates [3,33]. In liver, 6-MAM is hydrolysed to morphine and then the enzyme 5'-diphosphateglucuroniltrasferase (UGT) catalyses the binding of

glucuronide conjugates in position C3 or C6. The half-lives of heroin glucuronide metabolites are 2-6 hours and their long permanence in blood is due to enterohepatic recirculation. Specifically, both morphine and its metabolites follow this pathway: after biliary elimination of glucuronide metabolites, the latter are again hydrolysed to morphine by β -glucuronidases of colon microbiota [52]. Thus, new morphine enters the blood circulatory system [52]. Eventually, 5-8 hours after intravenous injection, 70% of heroin is eliminated with urines in 6-MAM, morphine and glucuronide metabolites form [53,54]. Also other heroin by-products, such as normorphine-glucuronide, codeine, morphine-3,6-diglucuronide and morphine-3-etheral sulfate can be present in minor quantities [3,33,55,56].

1.1 Italian legislation about worker's toxicological controls

The current Italian legislation provides that some categories of workers involved in tasks with security, health, and safety risks of third parties must undergo:

- Analyses to verify the absence of occasional or habitual assumption of narcotic substances (i.e. opiates, cocaine, cannabis, amphetamines, hallucinogens) and

psychotropic substances (i.e. benzodiazepines, barbiturates);

- Controls to ensure the respect of the ban on workplace drinking and to assess the absence of alcohol use disorders.

These verifications are an obligation of the employer and are carried out by the assigned competent doctor as a part of sanitary surveillance for health and safety protection of workers (art. 125 c. 1 D.P.R. n. 309/1990 e s.m.i.; Intesa Stato-Regioni 30/10/2007; Accordo Stato-Regioni 18/9/2008; art. 41 c. 4 D.Lgs. n. 81/2008 e s.m.i.) [57-60]. The lists of restricted substances and of risky jobs are definite (all. 1 Intesa 30/10/2007) [58] and the sanitary surveillance program (art. 41 c. 2 D.Lgs. n. 81/2008 e s.m.i) [60] includes a periodic medical check-up (usually once a year) upon request of the worker and in case of job change. As regards the assumption of narcotic and psychotropic substances, the medical assessment includes a physical examination and toxicological analyses on urine sample. In the event that in-depth diagnostic analyses are required (for example in case of positive toxicology test), the competent doctor directs the worker to the local chemical dependency service, called Servizio per le Dipendenze

(Ser.D.). Ser.D. is also the reference structure for the management of potential therapy/rehabilitation program of the subject.

1.2 Case report

In 2015 a railway employee was called to provide a urine sample for the routine forensic toxicological test to detect the possible presence of illicit substances. The urine sample was split into three aliquots, named "A", "B" and "C". Aliquot "A" was used to perform a preliminary immunoenzymatic assay, which turned positive for opiates (with a value equal or higher than the 300 ng/ml cut-off value). Hence, aliquot "B" underwent a confirmatory test since the preliminary screening assay can give false positives. A gas chromatography/mass spectrometry (GC/MS) analysis was performed in order to detect single molecules with high specificity and ionic-level resolution. In this case only morphine was detected with a concentration higher than the 100 ng/ml cut-off value. Eventually aliquot "C" was used to perform a GC/MS counter-analysis to further investigate the positive result upon request of the patient. The results indicated the presence of morphine and codeine, respectively with a concentration of 282 ng/ml

and 119 ng/ml (cut-off value: 100 ng/ml), while no 6-MAM metabolite was detected. In addition, hair test was performed by splitting the keratin matrix into three proximal and three distal centimetres and it turned negative for opiates. The subject declared that he had never taken illicit substances or opioid medicines, but he had ingested some bread with poppy seeds the night before the drug screening. Anyway, job suspension without pay occurred according to the law and lasted for several months, until it was empirically demonstrated that the positivity for morphine was due to the ingestion of the bread itself. Clearly, that bread contained poppy seeds that had not been treated according to the European food hygiene and safety regulations.

1.3 Research project on morphine positivity in commercial bread with poppy seeds

In 2020 breads with poppy seeds were consumed by twenty-two healthy subjects of both sexes (eight women and fourteen men), having different physical characteristics and lifestyles, and aged between 25-73 years old. Their urine samples were tested with the classical analytical chemistry methods searching for opiates.

All the participants (healthy, non-drug users or under pharmacological therapy) were volunteers and signed an informed consent. All of them strictly followed the rules of the experimental design, developed according to the scientific method.

Refer Figure 1 here - Bread with poppy seeds bought at the supermarket.

MATERIALS AND METHODS

2.1 Samples collection

Each volunteer was provided with two sterile urine containers and a loaf of bread with poppy seeds. The latter was ingested after collecting a urine sample, which was used as a blank for further comparisons. All the participants consumed the bread the night before the forensic toxicological screening. The respective urine samples, forty-four in total, were collected the next day.

2.2 Urine samples extraction

An aliquot of 4 ml of urine sample was added with internal standards, specifically scopolamine and nalorphine at 1000 ng/ml, and 4 ml of HCl 0.1 N for hydrolysis. Then samples were put in a centrifuge and the supernatant was collected for extraction. Solid-phase extraction was performed with the SPEC-3mL-MP1 system, which consists in a column that contains

fiberglass and silica packed discs. MP1 (Mixed Phase 1) acronym indicates the simultaneous presence of non-polar groups and cationic exchange groups. SPEC column was inserted in a vacuum manifold for activation: vacuum was between 5 and 10 mmHg, for the good interaction between the solution and the solid phase of the column. Moreover 1 ml of methanol and then 1 ml of HCl 0.1 N were added to activate the SCX (Sulfonic) groups present in the column. After activation, also the hydrolysed sample was injected into the column and several steps of aspiration and washing were performed by adding, respectively, 1 ml of HCl 0.1 N and then 1 ml of methanol. Eventually, 1.5 ml of elution solvent, which contained dichloromethane, isopropanol, and ammonia, was added to the column. The eluate was collected into a vial and the organic solvent was evaporated under nitrogen flow. After that, 50 µl of MSTFA were added for derivatization and the vial was placed in a thermostatic stove at 70°C before resuspension with 250 µl of dichloromethane.

2.3 Poppy seeds extraction

To corroborate the hypothesis that the presence of morphine traces in urine samples was due to the consumption of bread with poppy seeds, a qualitative analysis was

performed on poppy seeds themselves. After accurate mechanical extraction, the seeds were weighted (3.908 grams) and shredded in a mortar. Extraction solvent (26 ml of ethanol) was added in excess to the seed powder, which was subsequently put in ultrasonic bath for 30 minutes. Then the homogenate was filtered through filter paper and left to evaporate. The resulting product was an oil with a "dirty" matrix that contained various molecules of plant origin. To extrapolate only morphine, a selective extraction was performed by adding 3 ml of HCl 0.1 M and 1000 ng of both internal standards to the oily mixture. After that, the sample was centrifuged (2000 g for 10 minutes) and the aqueous phase was recovered. The latter underwent a solid-liquid extraction with SPEC-MP1 columns, as described in the previous paragraph for urine samples extraction.

2.4 GC/MS analysis

The analysis was performed with the Agilent 5975C Inert MSD-MS 7890 A gas chromatography machine and single quadrupole mass spectrophotometer system, equipped with the CTC PALL SAMPLER 80 automated sampler. Concerning the column, the HP-5MS UI 30 m x 0,250 mm model, with a run-time of about 30 minutes, was used. Mass spectra

were acquired in Selected Ion Monitoring (SIM) mode.

Refer Table 1 here- Retention Time (RT) and Ion rate (m/z) of the considered molecules.

2.5 LOD and LOQ

First, a calibration curve was built with the internal standards, to quantify the concentration of morphine in each sample. Moreover, a mixture of all the molecules under study, at proper concentration, was added to blank samples to evaluate the analytical sensitivity of the technique to each drug and its metabolites. After that, limit of detection (LOD, that is 5 ng/ml) and limit of quantitation (LOQ, that is 10 ng/ml) were determined. Limit of detection is the minimum concentration necessary to perform a qualitative analysis to detect a specific analyte. Instead, limit of quantitation is the maximum concentration up to which it is possible to obtain a quantitative measurement with the respective uncertainty and is higher than LOD. The range between the two limits (LOD and LOQ) in a calibration curve can discriminate only the presence or the absence of the analyte.

These samples were used to build a six-point calibration curve in the range of 10-500 ng/ml (10, 20, 50, 150, 300, 500 ng/ml). In

particular, considering the cut-off values suggested for morphine, the curve was constructed starting from 10 ng/ml value. Linear correlation coefficients for the molecules under study were optimal ($R^2 \geq 0.9977$).

Refer Figure 2 here - The calibration curve and R^2 value. After the chemical analysis of the substances under study and the construction of the calibration curve from the obtained data, it was assessed that the concentrations were lower enough than the standard cut-off values for urine matrix generally used by the laboratory. Specifically, the cut-off value for morphine is 50 ng/ml.

RESULTS

3.1 Urine samples

The results of the quantitative analysis indicate that no morphine or morphine-like synthetic substances were present in none of the twenty-two blank urine samples (data not shown).

Four subjects were positive for morphine, nevertheless its concentration, between 8 and 19.3 ng/ml, was under the cut-off value (i.e. Figure 3).

Refer Figure 3 here - A)

Chromatogram of the analysed urine sample of subject 1; B) Ion rates (m/z) of morphine (429,

414, 236) present in the analysed urine sample of subject 1.

One subject was positive for both morphine and codeine. The first was present in a concentration under the cut-off value (12.2 ng/ml), while the latter was over the cut-off value (134.1 ng/ml). Three more subjects were also positive for codeine, in concentration of 224 ng/ml, 82 ng/ml and 70 ng/ml.

Lastly, four subjects were markedly positive for morphine, in concentration of 487 ng/ml, 208 ng/ml, 205 ng/ml and 204 ng/ml. It should be specified that none of the participants ever took opiates or illicit substances; hence, it is reasonable to infer that the detected morphine, even though in concentration under the cut-off value, derived from the consumption of the provided bread with poppy seeds.

3.2 Poppy seeds sample

Gas-chromatography analysis on poppy seeds, mechanically extracted from bread, revealed the presence of morphine in the poppy seeds sample itself, as shown in **Refer Figure 4 here**: Chromatogram of the qualitative analysis on poppy seeds; B) Ion rates (m/z) of morphine (429, 414, 236) present in poppy seeds sample.

DISCUSSION

The absence of opiates in all the twenty-two blank urine samples

confirms with no exception that the presence of morphine, even if in minimal quantity, can be only due to the consumption of bread with poppy seeds. However, the quantity of poppy seeds, their nutrition facts or the species and the origin of the plant are not indicated in the nutritional information label of commercial bread with poppy seeds.

It is well known that morphine, so as other opiates like codeine and thebaine, is contained in the juice extracted from *Papaver somniferum* pod, a typical plant of the Middle East.

Initially they believed that the alkaloid was present only in juice and not in poppy seeds. However, since the 90s it became known in scientific literature that morphine and codeine are contained also in *Papaver somniferum* seeds. To this purpose, many international studies developed experimental protocols to detect these analytes [61-72]. Specifically, both analyses on seeds and empirical experiments on biological samples (like urine, blood, saliva) of volunteers after poppy seeds consumption have been performed. In the second case, biological samples underwent immunoenzymatic screening assays and confirmatory GC/MS analyses. Both analyses turned positive for

the analytes under study, which were present in concentration higher than the cut-off values. In summary, international scientific community has already demonstrated that the ingestion of food containing poppy seeds, or of the seeds themselves, results in the introduction of morphine and codeine in human organism. These substances are assimilated, metabolized and excreted via the canonical pathways and, from subject to subject, this may result in a marked positivity of GC/MS analysis.

The detection of opiates in food raised the problem even at European level. In fact, in 2014 the European Commission issued "Recommendation on good practices to prevent and to reduce the presence of opium alkaloids in poppy seeds and poppy seed products" (2014/662/UE), which was published on 10 September 2014 on the Official Journal of the European Union [73] and adopted in Italy by the Ministry of Agricultural, Food and Forestry Policies. The recommendation brought the attention of political and medical establishment on the concrete possibility to find opiates, in particular morphine and codeine, in food products. Their presence may depend on harvesting and sorting modalities

of poppy flowers. Specifically, if these processes are not properly done by following specific passages and quality checks, contamination with poppy pods and, thus, with the juice full of opiates, may occur. For this reason, the European Commission reports also the procedures to be adopted during cultivation, harvesting and storage of poppy plants destined for human consumption and the cooking temperatures of the various edible products, hoping for optimal controls and quality management by manufacturing and distribution companies. Clearly, these controls are not always performed in the appropriate manner and therefore unprocessed poppy seeds reach the consumers. Of course, the limited quantity of morphine and codeine in these seeds is not enough to cause dependence or habituation in human adults. However, their presence may represent a threat for infants and fetuses, whose xenobiotics detoxification pathways are still under development. Concerning the social and working aspect, the detection of opiates in adults that have never assumed these illicit substances can lead to undeserved repercussions at work and cause a reputational damage.

Conclusion: Bread with poppy seeds bought at the supermarket was administered to twenty-two healthy volunteers of both sexes (eight women and fourteen men), having different physical characteristics and lifestyles and aged between 25-73 years old, whose urines (blank urine before bread assumption and sample urine after intake) were tested with the classical chemical-analytical methods for opiates detection.

Analyses on blank urine samples confirmed that none of the volunteers took opioid medications or illicit substances. Instead, the analyses on urine samples collected after bread with poppy seeds consumption revealed the presence of morphine and codeine in some samples. In particular, these substances were present in variable concentrations among different samples and exceeded the cut-off value only in few cases. The inhomogeneous result may depend on the fact that, between 2015 (year of the case report) and 2020 (year of the research project), the considered bread underwent modifications of its nutritional properties. For this reason, the concentration of the analytes in some urine samples in the present study are lower than the cut-off value. Moreover, even differences in metabolism and

lifestyle among individuals may have strongly conditioned assimilation, metabolism and excretion of the analytes.

Analyses conducted in this study confirmed anyway that morphine detected in urine samples, even under the cut-off value, unequivocally derived from the consumption of food containing poppy seeds.

The ingestion of poppy seeds not properly processed according to the European food hygiene and safety regulations may result in the accidental assimilation of opiates, mainly morphine and codeine. The consequent detection of these substances during forensic toxicological analyses on workers puts their job placement, social position and family life at risk.

Eventually, this study leaves room for further analyses, since it cannot be excluded that the incidence of positive results for morphine may increase in case of a higher number of subjects, with different metabolic features, under study. Secondly, it should also be considered that a greater consumption of poppy seeds, regarding both absolute quantity and frequency, may result in higher morphine concentrations, even near or over the cut-off values established by law.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

References

1. Bertol, E.; Lodi, F.; Mari, F.; Marozzi, E. Trattato di tossicologia forense, Seconda Edizione.; CEDAM, 2000.
2. Aragón-Poce, F.; Martínez-Fernández, E.; Marquez-Espinos, C.; Perez, A.; Mora, R.; Torres, L. M. History of Opium. In International Congress Series; Elsevier, 2002; Vol. 1242, pp 19-21.
3. Baccini, C. Sostanze d'abuso e Tossicodipendenze: Una Visione Molecolare Del Fenomeno Droga; Sorbona Milano, 1997.
4. Denton, K. M. In the Arms of Morpheus. Am. J. Physiol.-Ren. Physiol. 2012, 302 (2), F234-F235.
5. Wink, M.; Van Wyk, B.-E. Mind-Altering and Poisonous Plants of the World; Timber Press Portland, 2008; Vol. 464.
6. Morphine, the Proteus of organic molecules - Chemical Communications (RSC Publishing) <https://pubs.rsc.org/en/content/articlelanding/2002/cc/b111551k> (accessed 2021 -11 -25).
7. Cumston, C. G. An Introduction to the History of Medicine: From the Time of the Pharaohs to the End of the XVIIIth Century; Routledge, 2018; Vol. 3.
8. Duke, J. A. Utilization of Papaver. Econ. Bot. 1973, 27 (4), 390-400.
9. Kapoor, L. Opium Poppy: Botany, Chemistry, and Pharmacology; CRC Press, 1995.

10. Bernath, J. Poppy: The Genus Papaver; CRC Press, 1999.
11. Miller, R. J.; Tran, P. B. More Mysteries of Opium Reveal'd: 300 Years of Opiates. Trends Pharmacol. Sci. 2000, 21 (8), 299-304.
[https://doi.org/10.1016/s0165-6147\(00\)01516-9](https://doi.org/10.1016/s0165-6147(00)01516-9).
12. Askitopoulou, H.; Ramoutsaki, I. A.; Konsolaki, E. Archaeological Evidence on the Use of Opium in the Minoan World. In International Congress Series; Elsevier, 2002; Vol. 1242, pp 23-29.
13. Martíñez-Fernández, E.; Aragón-Poce, F.; Márquez-Espinós, C.; Pérez-Pérez, A.; Pérez-Bustamante, F.; Torres-Morera, L. M. The History of Opiates. In International Congress Series; 2002; pp 75-77.
14. Schiff, P. L. Opium and Its Alkaloids. Am. J. Pharm. Educ. 2002, 66 (2), 188-196.
15. Bozan, B.; Temelli, F. Chemical Composition and Oxidative Stability of Flax, Safflower and Poppy Seed and Seed Oils. Bioresour. Technol. 2008, 99 (14), 6354-6359.
<https://doi.org/10.1016/j.biortech.2007.12.009>.
16. Cordell, G. A. Fifty Years of Alkaloid Biosynthesis in Phytochemistry. Phytochemistry 2013, 91, 29-51.
<https://doi.org/10.1016/j.phytochem.2012.05.012>.
17. Windle, J. Harms Caused by China's 1906-17 Opium Suppression Intervention. Int. J. Drug Policy 2013, 24 (5), 498-505.
<https://doi.org/10.1016/j.drugpo.2013.03.001>.
18. Kalant, H. Opium Revisited: A Brief Review of Its Nature, Composition, Non-Medical Use and Relative Risks. Addict. Abingdon Engl. 1997, 92 (3), 267-277.
19. Brook, K.; Bennett, J.; Desai, S. P. The Chemical History of Morphine: An 8000-Year Journey, from Resin to de-Novo Synthesis. J. Anesth. Hist. 2017, 3 (2), 50-55.
<https://doi.org/10.1016/j.janh.2017.02.001>.
20. Haghjooy-Javanmard, S.; Ghasemi, A.; Laher, I.; Zarrin, B.; Dana, N.; Vaseghi, G. Influence of Morphine on TLR4/ NF-KB Signaling Pathway of MCF-7 Cells. Bratisl. Lek. Listy 2018, 119 (4), 229-233.
https://doi.org/10.4149/BLL_2018_043.
21. Leite Junior, J. B.; de Mello Bastos, J. M.; Samuels, R. I.; Carey, R. J.; Carrera, M. P. Reversal of Morphine Conditioned Behavior by an Anti-Dopaminergic Post-Trial Drug Treatment during Re-Consolidation. Behav. Brain Res. 2019, 359, 771-782.
<https://doi.org/10.1016/j.bbr.2018.08.009>.
22. Brunk, S. F.; Delle, M. Morphine Metabolism in Man. Clin. Pharmacol. Ther. 1974, 16 (1), 51-57.
<https://doi.org/10.1002/cpt1974161part151>.
23. Hoskin, P. J.; Hanks, G. W.; Aherne, G. W.; Chapman, D.; Littleton, P.; Filshie, J. The Bioavailability and Pharmacokinetics of Morphine after Intravenous, Oral and Buccal Administration in Healthy Volunteers. Br. J. Clin. Pharmacol. 1989, 27 (4), 499-505.
<https://doi.org/10.1111/j.1365-2125.1989.tb05399.x>.
24. Barut, G. A.; Tunç, M.; Şahin, Ş.; Ulus, F.; Sazak, H. Effects of Epidural Morphine and Levobupivacaine Combination before Incision and after Incision and in the Postoperative Period on Thoracotomy Pain and Stress Response. Turk. J. Med. Sci. 2018, 48 (4), 716-723.
<https://doi.org/10.3906/sag-1706-106>.
25. Anghelescu, D. L.; Guo, A.; Morgan, K. J.; Frett, M.; Prajapati, H.; Gold, R.; Federico, S. M. Pain Outcomes After Celiac Plexus Block in Children and Young Adults with Cancer. J. Adolesc. Young Adult Oncol. 2018, 7 (6),

- 666-672.
<https://doi.org/10.1089/jayao.2018.0035>.
26. Osborne, R.; Joel, S.; Trew, D.; Slevin, M. Morphine and Metabolite Behavior after Different Routes of Morphine Administration: Demonstration of the Importance of the Active Metabolite Morphine-6-Glucuronide. *Clin. Pharmacol. Ther.* 1990, 47 (1), 12-19.
<https://doi.org/10.1038/clpt.1990.2>.
27. Säwe, J.; Dahlström, B.; Paalzow, L.; Rane, A. Morphine Kinetics in Cancer Patients. *Clin. Pharmacol. Ther.* 1981, 30 (5), 629-635.
<https://doi.org/10.1038/clpt.1981.214>.
28. Säwe, J.; Svensson, J. O.; Rane, A. Morphine Metabolism in Cancer Patients on Increasing Oral Doses--No Evidence for Autoinduction or Dose-Dependence. *Br. J. Clin. Pharmacol.* 1983, 16 (1), 85-93.
<https://doi.org/10.1111/j.1365-2125.1983.tb02148.x>.
29. Gourlay, G. K.; Cherry, D. A.; Cousins, M. J. A Comparative Study of the Efficacy and Pharmacokinetics of Oral Methadone and Morphine in the Treatment of Severe Pain in Patients with Cancer. *Pain* 1986, 25 (3), 297-312.
[https://doi.org/10.1016/0304-3959\(86\)90234-4](https://doi.org/10.1016/0304-3959(86)90234-4).
30. Dahlström, B.; Bolme, P.; Feychting, H.; Noack, G.; Paalzow, L. Morphine Kinetics in Children. *Clin. Pharmacol. Ther.* 1979, 26 (3), 354-365.
<https://doi.org/10.1002/cpt197926.3354>.
31. Owen, J. A.; Sitar, D. S.; Berger, L.; Brownell, L.; Duke, P. C.; Mitenko, P. A. Age-Related Morphine Kinetics. *Clin. Pharmacol. Ther.* 1983, 34 (3), 364-368.
<https://doi.org/10.1038/clpt.1983.180>.
32. Stanski, D. R.; Greenblatt, D. J.; Lowenstein, E. Kinetics of Intravenous and Intramuscular Morphine. *Clin. Pharmacol. Ther.* 1978, 24 (1), 52-59.
<https://doi.org/10.1002/cpt197824.152>.
33. Hardman, J. G.; Lee E., L. Goodman & Gilman Le Basi Farmacologiche Della Terapia. (13th edition). Zanichelli, 2019.
34. Yeh, S. Y.; Gorodetzky, C. W.; Krebs, H. A. Isolation and Identification of Morphine 3- and 6-Glucuronides, Morphine 3,6-Diglucuronide, Morphine 3-Ethereal Sulfate, Normorphine, and Normorphine 6-Glucuronide as Morphine Metabolites in Humans. *J. Pharm. Sci.* 1977, 66 (9), 1288-1293.
<https://doi.org/10.1002/jps.2600660921>.
35. Chen, Z. R.; Irvine, R. J.; Somogyi, A. A.; Bochner, F. Mu Receptor Binding of Some Commonly Used Opioids and Their Metabolites. *Life Sci.* 1991, 48 (22), 2165-2171.
[https://doi.org/10.1016/0024-3205\(91\)90150-a](https://doi.org/10.1016/0024-3205(91)90150-a).
36. Sullivan, A. F.; McQuay, H. J.; Bailey, D.; Dickenson, A. H. The Spinal Antinociceptive Actions of Morphine Metabolites Morphine-6-Glucuronide and Normorphine in the Rat. *Brain Res.* 1989, 482 (2), 219-224.
[https://doi.org/10.1016/0006-8993\(89\)91184-0](https://doi.org/10.1016/0006-8993(89)91184-0).
37. Christrup, L. L. Morphine Metabolites. *Acta Anaesthesiol. Scand.* 1997, 41 (1 Pt 2), 116-122.
<https://doi.org/10.1111/j.1399-6576.1997.tb04625.x>.
38. Lötsch, J.; Stockmann, A.; Kobal, G.; Brune, K.; Waibel, R.; Schmidt, N.; Geisslinger, G. Pharmacokinetics of Morphine and Its Glucuronides after Intravenous Infusion of Morphine and Morphine-6-Glucuronide in Healthy Volunteers. *Clin. Pharmacol. Ther.* 1996, 60 (3), 316-325.
[https://doi.org/10.1016/S0009-9236\(96\)90058-2](https://doi.org/10.1016/S0009-9236(96)90058-2).
39. Peat, S. J.; Hanna, M. H.; Woodham, M.; Knibb, A. A.; Ponte, J. Morphine-6-Glucuronide: Effects

- on Ventilation in Normal Volunteers. *Pain* 1991, 45 (1), 101-104. [https://doi.org/10.1016/0304-3959\(91\)90170-3](https://doi.org/10.1016/0304-3959(91)90170-3).
40. Säwe, J.; Svensson, J. O.; Odar-Cederlöf, I. Kinetics of Morphine in Patients with Renal Failure. *Lancet Lond. Engl.* 1985, 2 (8448), 211. [https://doi.org/10.1016/s0140-6736\(85\)91520-x](https://doi.org/10.1016/s0140-6736(85)91520-x).
41. Säwe, J.; Odar-Cederlöf, I. Kinetics of Morphine in Patients with Renal Failure. *Eur. J. Clin. Pharmacol.* 1987, 32 (4), 377-382. <https://doi.org/10.1007/BF00543973>.
42. Sneader, W. The Discovery of Heroin. *Lancet Lond. Engl.* 1998, 352 (9141), 1697-1699. [https://doi.org/10.1016/S0140-6736\(98\)07115-3](https://doi.org/10.1016/S0140-6736(98)07115-3).
43. Klemenc, S. 4-Dimethylaminopyridine as a Catalyst in Heroin Synthesis. *Forensic Sci. Int.* 2002, 129 (3), 194-199. [https://doi.org/10.1016/s0379-0738\(02\)00291-8](https://doi.org/10.1016/s0379-0738(02)00291-8).
44. Williams, F. M. Clinical Significance of Esterases in Man. *Clin. Pharmacokinet.* 1985, 10 (5), 392-403. <https://doi.org/10.2165/00003088-198510050-00002>.
45. Williams, P. E. Factors Affecting the Oral Absorption of Esterified Antibiotics. *Biochem. Soc. Trans.* 1985, 13 (2), 511-513. <https://doi.org/10.1042/bst0130511>.
46. Oldendorf, W. H.; Hyman, S.; Braun, L.; Oldendorf, S. Z. Blood-Brain Barrier: Penetration of Morphine, Codeine, Heroin, and Methadone after Carotid Injection. *Science* 1972, 178 (4064), 984-986. <https://doi.org/10.1126/science.178.4064.984>.
47. Cornford, E. M.; Braun, L. D.; Oldendorf, W. H.; Hill, M. A. Comparison of Lipid-Mediated Blood-Brain-Barrier Penetrability in Neonates and Adults. *Am. J. Physiol.* 1982, 243 (3), C161-168. <https://doi.org/10.1152/ajpcell.1982.243.3.C161>.
48. Rook, E. J.; Huitema, A. D. R.; van den Brink, W.; van Ree, J. M.; Beijnen, J. H. Population Pharmacokinetics of Heroin and Its Major Metabolites. *Clin. Pharmacokinet.* 2006, 45 (4), 401-417. <https://doi.org/10.2165/00003088-200645040-00005>.
49. Selley, D. E.; Cao, C. C.; Sexton, T.; Schwegel, J. A.; Martin, T. J.; Childers, S. R. Mu Opioid Receptor-Mediated G-Protein Activation by Heroin Metabolites: Evidence for Greater Efficacy of 6-Monoacetylmorphine Compared with Morphine. *Biochem. Pharmacol.* 2001, 62 (4), 447-455. [https://doi.org/10.1016/s0006-2952\(01\)00689-x](https://doi.org/10.1016/s0006-2952(01)00689-x).
50. Mignat, C.; Heber, D.; Schlicht, H.; Ziegler, A. Synthesis, Opioid Receptor Affinity, and Enzymatic Hydrolysis of Sterically Hindered Morphine 3-Esters. *J. Pharm. Sci.* 1996, 85 (7), 690-694. <https://doi.org/10.1021/js9600336>.
51. Inturrisi, C. E.; Schultz, M.; Shin, S.; Umans, J. G.; Angel, L.; Simon, E. J. Evidence from Opiate Binding Studies That Heroin Acts through Its Metabolites. *Life Sci.* 1983, 33 Suppl 1, 773-776. [https://doi.org/10.1016/0024-3205\(83\)90616-1](https://doi.org/10.1016/0024-3205(83)90616-1).
52. Hasselström, J.; Säwe, J. Morphine Pharmacokinetics and Metabolism in Humans. Enterohepatic Cycling and Relative Contribution of Metabolites to Active Opioid Concentrations. *Clin. Pharmacokinet.* 1993, 24 (4), 344-354. <https://doi.org/10.2165/00003088-199324040-00007>.
53. Mo, B. P.; Way, E. L. An Assessment of Inhalation as a Mode of Administration of Heroin by Addicts. *J. Pharmacol. Exp. Ther.* 1966, 154 (1), 142-151.
54. Elliott, H. W.; Parker, K. D.; Wright, J. A.; Nomof, N. Actions

- and Metabolism of Heroin Administered by Continuous Intravenous Infusion to Man. Clin. Pharmacol. Ther. 1971, 12 (5), 806-814.
<https://doi.org/10.1002/cpt1971125806>.
55. Boerner, U.; Roe, R. L.; Becker, C. E. Detection, Isolation and Characterization of Normorphine and Norcodeine as Morphine Metabolites in Man. J. Pharm. Pharmacol. 1974, 26 (6), 393-398.
<https://doi.org/10.1111/j.2042-7158.1974.tb09303.x>.
56. Yeh, S. Y.; Gorodetzky, C. W.; McQuinn, R. L. Urinary Excretion of Heroin and Its Metabolites in Man. J. Pharmacol. Exp. Ther. 1976, 196 (2), 249-256.
57. Gazzetta Ufficiale https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2008-10-08&atto.codiceRedazionale=08A07139&elenco30giorni=false (accessed 2021 -11 -25).
58. Gazzetta Ufficiale <https://www.gazzettaufficiale.it/eli/id/2007/11/15/07A09622/sg> (accessed 2021 -11 -25).
59. DPR 309/90 coordinato - articolo 125: Accertamenti di assenza di tossicodipendenza e s.m.i.
<https://www.medicoeleggi.com/argomenti00/italia2006/19067-125.htm> (accessed 2021 -11 -25).
60. Luglio, R. (Gazzetta Ufficiale n. 101 del 30 aprile 2008 - Suppl. Ordinario n. 108) (Decreto integrativo e correttivo: Gazzetta Ufficiale n. 180 del 05 agosto 2009 - Suppl. Ordinario n. 142/L). 2008, No. 81, 1019.
61. Rohrig, T. P.; Moore, C. The Determination of Morphine in Urine and Oral Fluid Following Ingestion of Poppy Seeds. J. Anal. Toxicol. 2003, 27 (7), 449-452.
<https://doi.org/10.1093/jat/27.7.449>.
62. Concheiro, M.; Newmeyer, M. N.; da Costa, J. L.; Flegel, R.; Gorelick, D. A.; Huestis, M. A. Morphine and Codeine in Oral Fluid after Controlled Poppy Seed Administration. Drug Test. Anal. 2015, 7 (7), 586-591.
<https://doi.org/10.1002/dta.1742>.
63. Beck, O.; Vitols, S.; Stensiö, M. Positive Urine Screening for Opiates after Consumption of Sandwich Bread with Poppy Seed Flavoring. Ther. Drug Monit. 1990, 12 (6), 585-586.
<https://doi.org/10.1097/00007691-199011000-00014>.
64. Samano, K. L.; Clouette, R. E.; Rowland, B. J.; Sample, R. H. B. Concentrations of Morphine and Codeine in Paired Oral Fluid and Urine Specimens Following Ingestion of a Poppy Seed Roll and Raw Poppy Seeds. J. Anal. Toxicol. 2015, 39 (8), 655-661.
<https://doi.org/10.1093/jat/bkv081>.
65. Smith, M. L.; Nichols, D. C.; Underwood, P.; Fuller, Z.; Moser, M. A.; LoDico, C.; Gorelick, D. A.; Newmeyer, M. N.; Concheiro, M.; Huestis, M. A. Morphine and Codeine Concentrations in Human Urine Following Controlled Poppy Seeds Administration of Known Opiate Content. Forensic Sci. Int. 2014, 241, 87-90.
<https://doi.org/10.1016/j.forsciint.2014.04.042>.
66. elSohly, H. N.; elSohly, M. A.; Stanford, D. F. Poppy Seed Ingestion and Opiates Urinalysis: A Closer Look. J. Anal. Toxicol. 1990, 14 (5), 308-310.
<https://doi.org/10.1093/jat/14.5.308>.
67. elSohly, H. N.; Stanford, D. F.; Jones, A. B.; elSohly, M. A.; Snyder, H.; Pedersen, C. Gas Chromatographic/Mass Spectrometric Analysis of Morphine and Codeine in Human Urine of Poppy Seed Eaters. J. Forensic Sci. 1988, 33 (2), 347-356.
68. ElSohly, M. A.; Jones, A. B. Morphine and Codeine in Biological Fluids: Approaches to Source Differentiation. Forensic Sci. Rev. 1989, 1 (1), 13-22.

69. Jankovicová, K.; Ulbrich, P.; Fuknová, M. Effect of Poppy Seed Consummation on the Positive Results of Opiates Screening in Biological Samples. Leg. Med. Tokyo Jpn. 2009, 11 Suppl 1, S416-418.
<https://doi.org/10.1016/j.legalmed.2009.03.002>.
70. Lachenmeier, D. W.; Sproll, C.; Musshoff, F. Poppy Seed Foods and Opiate Drug Testing--Where Are We Today? Ther. Drug Monit. 2010, 32 (1), 11-18.
<https://doi.org/10.1097/FTD.0b013e3181c0eee0>.
71. Moeller, M. R.; Hammer, K.; Engel, O. Poppy Seed Consumption and Toxicological Analysis of Blood and Urine Samples. Forensic Sci. Int. 2004, 143 (2-3), 183-186.
<https://doi.org/10.1016/j.forsciint.2004.03.027>.
72. Zentai, A.; Sali, J.; Szeitzné-Szabó, M.; Szabó, I. J.; Ambrus, Á. Exposure of Consumers to Morphine from Poppy Seeds in Hungary. Food Addit. Contam. Part Chem. Anal. Control Expo. Risk Assess. 2012, 29 (3), 403-414.

<https://doi.org/10.1080/19440049.2011.636762>.

73. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0662&from=SK>.

Disclaimer/Publisher's Note: The information statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of IJMJ and/or the editor(s). IJMJ and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any innovation, ideas, methodology, instructions, conclusions, or products referred to in the content.

Copyright: © 2023 by the authors. Licensee GLAFIMS ASSOCIATION, Aligarh, India. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)



Figure 1 - Bread with poppy seeds bought at the supermarket.

Molecules	Retention Time (min)	Ion rate m/z
Morphine	16.00	429, 414, 236
6-MAM	16.53	399, 340, 287
Nalorphine	17.00	455, 414, 324
Scopolamine	14.58	375, 154, 138

Table 1 - Retention Time (RT) and Ion rate (m/z) of the considered molecules.

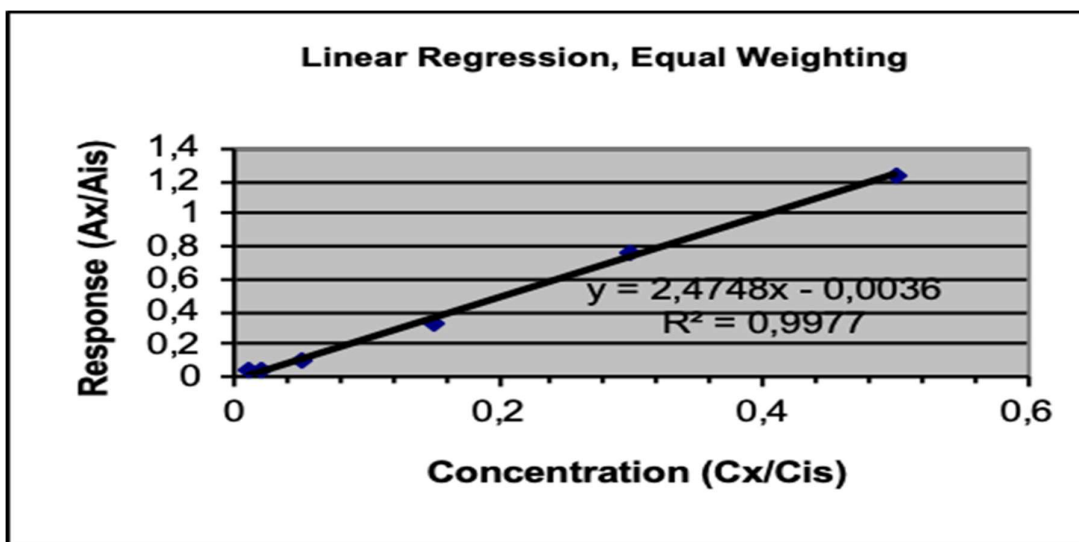


Figure 2 - The calibration curve and R^2 value.

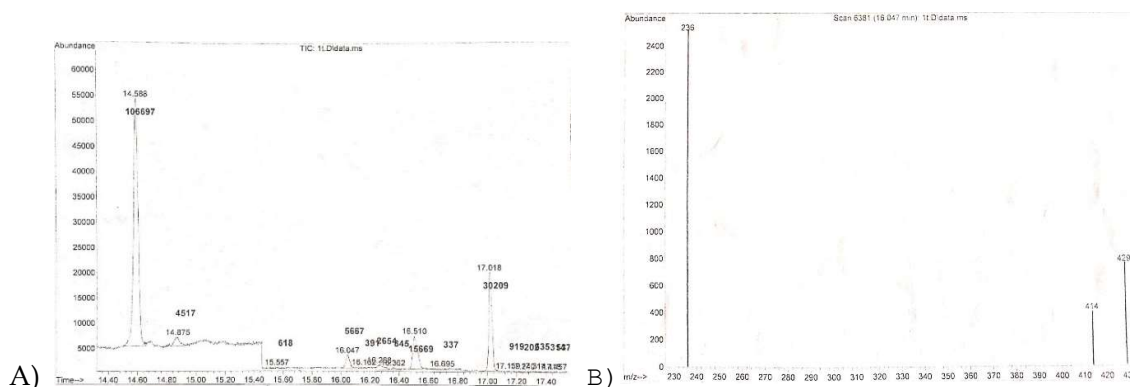


Figure 3 - A) Chromatogram of the analysed urine sample of subject 1; B) Ion rates (m/z) of morphine (429, 414, 236) present in the analysed urine sample of subject 1.

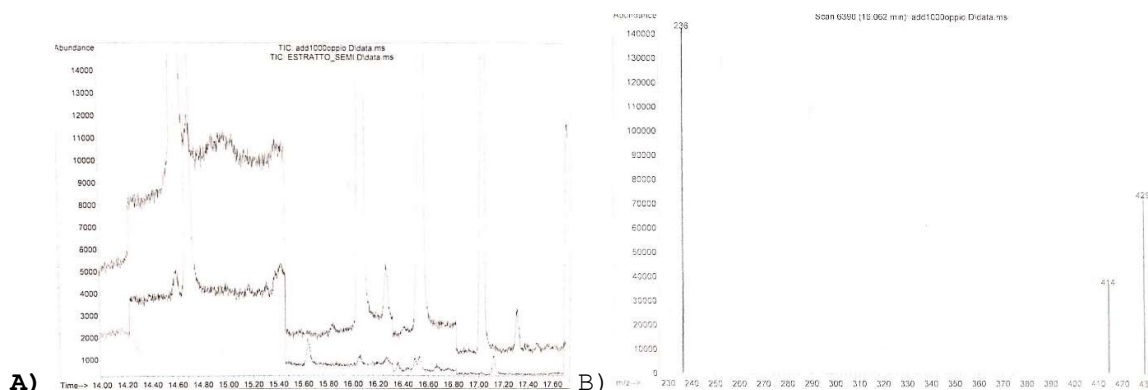


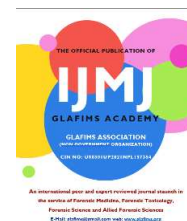
Figure 4 - A) Chromatogram of the qualitative analysis on poppy seeds; B) Ion rates (m/z) of morphine (429, 414, 236) present in poppy seeds sample.

Disclaimer/Publisher's Note: The information statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of IJMJ and/or the editor(s). IJMJ and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any innovation, ideas, methodology, instructions, conclusions, or products referred to in the content.



Content list Available at ijmj.net
**International Journal of
Medical Justice**

Journal Homepage: <https://www.ijmj.net>



Review Article

Art of Parenting vs Parental Child Abuse – Choose a Right Path

Pragnesh Parmar*, Gunvanti Rathod**

*Additional Professor and HOD, Forensic Medicine and Toxicology, AIIMS, Bibinagar, Telangana, India

**Additional Professor, Pathology and Lab Medicine, AIIMS, Bibinagar, Telangana, India

Article History:

Date of Submission: Saturday December 4, 2023.

Date of Revision: Saturday December 31, 2023.

Date of Acceptance: Saturday December 11, 2023.

Date of Publication: Sunday January 15, 2023

Digital Object Identifier [DOI]: <https://doi.org/10.5281/zenodo.7536848>

Available Online: Thursday January 26, 2023

Website Archive: <https://www.ijmj.net/archive/2023/1/1/IJMJ-2023-12.pdf>

Citation: Pragnesh Parmar, & Gunvanti Rathod. (2023). Art of Parenting vs Parental Child Abuse – Choose a Right Path. International Journal of Medical Justice, 1(1), 23-26. <https://doi.org/10.5281/zenodo.7536848>

Indexing: Indexed in [OpenAIRE](#)

Keywords: Art of parenting, Parental child abuse, Right path.

Academic Editors: Dr Doaa Abdel Wahab El Morsi, Dr Richa Gupta

Corresponding Author:

Dr. Pragnesh B. Parmar

Additional Professor & HOD

Department of Forensic Medicine and Toxicology

All India Institute of Medical Sciences (AIIMS), Bibinagar

E mail – drprag@gmail.com

© by GLAFIMS ASSOCIATION. All rights reserved.

Abstract: Incidence of child abuse is increasing day by day. Parents, close relatives, friends or neighbors are frequently involved in it. Under reporting of incidence, social stigma, fear, etc. are widely prevalent in the society for child abuse. In this review article, we tried to discuss various parental child abuse and key features of art of parenting to overcome such issues. Information regarding what parents can do to avoid child abuse can be disseminated via public lectures, role play, educational videos etc. among parents and children to identify, prevent and avoid child abuse.

Key words: Art of parenting, Parental child abuse, Right path.

Introduction: Many times we come across newspaper headlines mentioning parental child abuse or ignorance of child by parents or various surveys on parenting. There are various ways by which parents are knowingly or unknowingly abusing the child. Seven types of parental child abuse are discussed here briefly to get overview regarding various forms of child abuse [1].

Physical abuse: Intimidating by standing over, isolation of child by not supporting in difficult times, restraint in a close room, aggressive hitting, endanger

verbal threats to child etc. are various forms of physical abuse to child [1].

Mental abuse: Rage on child without reason, lying to child which creates doubt in memory of child, Silent treatment punishment by ignoring illness of child or not providing timely treatment, projecting problems like dumping own issues on child, twisting the truth to blame child, playing victim card when rest all fails, etc. are various ways of mental abuse to child.

Verbal abuse: Use of high tone of voice against children, interrogating child on various issues, creating blame game, constant criticism, not asking apology when needed are verbal abuse of child by parents [1].

Emotional abuse: Creating embarrassment or shame to child by sharing private moments of child to others without willingness of child, producing sense of insecurity in child, self-feeling of excessive guilt, increasing anxiety by frequent questioning, restricting purposefully what child likes, etc. are types of emotional abuse [1].

Financial abuse: Forbidden the access to gifts and money what child got from others, Opening bank account in child's name

without knowledge of child, not providing adequate money for career building of child, allocation of strict budget for day to day activity, credit card or bill in the name of child, etc. are financial abuse [1].

Sexual abuse: Unwanted or embarrassing sexual act in front of child as part of grooming, molestation by touching private parts, rape, sadistic behavior, compel child to watch pornography, etc. various forms of sexual abuse are present in the society [1].

Spiritual abuse: Blind obedience of order given, diving friends on basis of religion, public performance without willingness of child, strict adherence to parents' command, strict following of religious rituals, etc. may be considered as spiritual abuse [1].

Effective parenting: Parents must teach their child what is good and what is bad as good in - good out on the contrary garbage in - garbage out. Parents have to identify bad association vs good association of child because good association make child flourish while bad association will destroy the future. Inculcating good habits among child is prime importance of parents like reading books, helping others

while excessive watching TV or mobile must be avoided. Teach child how to control or win lust of anything because if lust will satisfy it may turn into greed lie substance abuse [2, 3] and if lust will not satisfy it create anger. Good thought leads to good action, good action converts into good habit, good habit turns into good character and good character will land up in good destiny. Parents must teach their children how to manage mind to avoid depression, anxiety, fear, greed, loneliness among children. Give unconditional love to child till the age of five years, Teach them discipline and etiquette between age of six to fifteen years, from sixteen years onwards be friend of your child. Those parents who do not educate their children are their enemies. So try to provide best opportunity to your children to mould their future [4].

What parents can do: Give your time to child, teach discipline to child, educate them, examine carefully behavior of child, Teach children their right, support child abuse prevention program, learn to know the sign of child abuse, know what child abuse is, report the abuse to authority and be supportive to child by investing time, money and love [5].

Conclusion: Good parenting is an art to learn and it is very much needed in this current era to support and nurture the child. Instead of abusing the child, showing them right direction and guiding on the path of life is prime role of parents. If parents will choose the right path then child will be benefitted by their parenting but if parents will abuse then child will be destroyed. Educational programs like public lectures, debate as well various case scenarios of subjects, role play should be required to increase knowledge and awareness among parents and children [6]. Various issues have emerged during COVID times regarding compulsory vaccination to child [7], eye problems due to e learning [8], excessive use of social media during lockdown [9, 10, 11], etc. which need to be dealt as parents carefully. Various funding agencies should come up to support research in the field off parental child abuse [12].

References:

1. <https://psychcentral.com/pro/exhausted-woman/2016/12/7-types-of-parental-abuse>. Accessed on 25th November, 2022.
2. Parmar P, Rathod GB, Rathod S, Parikh A. Drug abuse and illicit drug trafficking vis-à-vis human life - A review. Prensa Med Argent, 2015; 101:2.
3. Pragnesh P. Knowledge and Awareness Regarding Substance Addiction Among Medical Students of Valsad, Gujarat.

Forensic Sci Add Res., 2018; 3(5). FSAR.000585.

4. https://www.issa.nl/sites/default/files/pdf/Publications/cross%20sectoral/Resource%20Modules%20for%20Home%20Visitors%20Module%206.web_.pdf. Accessed on 28th November, 2022.
5. <https://www.dcyf.wa.gov/safety/prevent-child-abuse>. Accessed on 20th November, 2022.
6. Bhoot RR, Parmar PB. Dowry and domestic violence against women - Knowledge and awareness among medical students. Indian Journal of Forensic Medicine and Toxicology. IJFMT, 2018; 12(3): 79-81.
7. S Yadukul, Parmar P, M Prashanth, Reddy Divya, S Annapurna. Covid-19 vaccination for children in India: Queries and Clarifications regarding consent. Indian J Prev Soc Med., 2022; 53(1): 69-72.
8. Rathod G, Parmar P, Maru A. Dry eye: The side effect of COVID pandemic. IAIM, 2022; 9(3): 28-29.
9. Rathod G, Parmar P. E learning in medical education during COVID era. D Y Patil J Health Sci, 2021; 9: 39-40.
10. Rathod G, Parmar P. E learning: A boon of COVID era. Acta Scientific Cancer Biology, 2021; 5(12): 15-16.
11. Parmar P, Rathod G. Current trends of social medial in medical education. IAIM, 2021; 8(3): 55-56.
12. Akram M, Egbuna C, Riaz Z, et al. Global research funding and development. IPS Interdisciplinary Journal of Biological Sciences, 2022; 1(1): 11-18.

Disclaimer/Publisher's Note: The information statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of IJMJ and/or the editor(s). IJMJ and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any innovation, ideas, methodology, instructions, conclusions, or products referred to in the content.

Copyright: © 2023 by the authors. Licensee GLAFIMS ASSOCIATION, Aligarh, India. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4>).



Content list Available at ijmj.net

International Journal of Medical Justice

Journal Homepage: <https://www.ijmj.net>



Case Report

A Fatal Case of ruptured carotid aneurysm

A. Haricharan*, Soibam Neha**, Asho Angami*, Lourembam Frieny*, Th. Meera Devi***.

*Post Graduate Trainee, **Senior Resident, ***Head of Department,
Department of Forensic Medicine & Toxicology, Regional Institute of Medical
Science, Imphal.

Article History:

Date of Submission: Thursday December 22, 2022

Date of Revision: Thursday December 29, 2022

Date of Acceptance: Wednesday January 11, 2023

Date of Publication: Sunday January 15, 2023

Digital Object Identifier [DOI]: <https://doi.org/10.5281/zenodo.7536864>

Available Online: Thursday January 26, 2023

Website Archive: <https://www.ijmj.net/archive/2023/1/1/IJMJ-2023-13.pdf>

Citation: A. Haricharan, Soibam Neha, Asho Angami, Lourembam Frieny, & Th. Meera Devi. (2023). A Fatal Case of ruptured carotid aneurysm. International Journal of Medical Justice, 1(1), 27-31. <https://doi.org/10.5281/zenodo.7536864>

Indexing: Indexed in [OpenAIRE](#)

Keywords: Aneurysm, Carotid Artery, Rupture, Sudden Death

Academic Editors: Dr Shruthi Jillella, Dr Yatiraj Singi

Corresponding Author:

Dr A. Haricharan,

Post Graduate Trainee,

Department of Forensic Medicine & Toxicology,

Regional Institute of Medical Science, Imphal.

email id: haricharanpr@gmail.com

© by GLAFIMS ASSOCIATION. All rights reserved.

Abstract: An aneurysm is an abnormal bulge or ballooning in the wall of a blood vessel and aneurysm ruptures may lead to sudden death. Aneurysms of the extracranial carotid arteries are uncommon vascular lesions and atherosclerosis is considered a common cause. The rupture of a nontraumatic, uninfected carotid aneurysm is an exceedingly rare event, with only a handful of cases documented in the scientific literature. The present case report is that of the sudden death of a person due to the rupture of a previously undiagnosed carotid aneurysm. The case has been presented considering its rarity.

Keywords: aneurysm, carotid artery, rupture, sudden death

Introduction: An aneurysm is an abnormal bulge or ballooning in the wall of a blood vessel. The most common artery to develop an aneurysm is the aorta, followed by the iliac artery, femoral artery, and popliteal artery. Less commonly, aneurysms can develop in the carotid, subclavian, renal, and mesenteric arteries.¹ Aneurysm of the extracranial carotid arteries are uncommon vascular lesions and atherosclerosis is a possible cause. Most people have no acute symptoms, but chronic conditions may lead to fatal outcomes. The rupture of a nontraumatic,

uninfected carotid aneurysm is an exceedingly rare event, with only a handful of cases documented in the scientific literature. The present case report is that of a sudden death of a person due to the rupture of a previously undiagnosed carotid aneurysm. The case has been presented considering its rarity.

Case Report:

In the late March of 2022 in Imphal, Manipur(India), a 58-year-old man was found in an unconscious state in his hotel room. According to the police report, the room was locked from the inside. The deceased was transferred to a nearby tertiary care hospital; however, he was declared brought dead upon arrival. On further investigation, the members of his family informed that he was a chronic alcoholic and hypertensive, who was on irregular medication for several years.

Autopsy Findings:

External Appearance/ Examination:

- (a) Stature: 178 cm (b) Weight: 76 kg
- (c) Physique: Average
- (d) Nutrition: Good (e) Posture: Normal
- (f) Identification marks: Identified body
- (g) Post-mortem changes and other appearances of the body: Rigor mortis fully developed. Post-mortem staining was present at back and fixed. Congestion was seen over

the face, eyes, and upper chest. Lips and fingertips cyanosed.

h). External Injuries: No external Findings

Internal Appearance/ Examination:

In the head, meninges and vessels were congested, and the brain was congested. In the abdomen, the liver shows cirrhotic changes, and the pancreas was congested. In the thorax, bilateral lungs were congested. Chest cavity filled with about 500ml of blood and blood clots.

Histopathology Findings:

Heart : (gross findings)

Hypertrophied Heart weight was around 650 grams (Fig 1).

Heart examined around the flow of blood: All chambers are normal, papillary muscle, chordae tendinae and valves are normal. Left coronaries occlusion was present(Fig 2). The full-thickness transverse tear was seen over the left common carotid artery (Fig3). Aorta has fatty streak discolouration. Right Ventricular Width thickness 0.3cm, Left Ventricular Width thickness 1.4cm, Interventricular Septum thickness 1.3cm.

Heart : (Histology findings)

The left ventricle wall shows congestion and mild hypertrophy of the cardiac myocytes. Sections of the left coronary artery show atherosclerotic change with 50 %

occlusion (Fig 4). Left coronary artery show atherosclerotic change with 20 % occlusion. Sections from the aorta show atherosclerotic changes.

Cause of death: " Shock and haemorrhage resulting from spontaneous rupture of the aneurysm of the left common carotid artery".

Toxicology Findings: Ethyl alcohol (ethanol) was detected from blood.

Discussion: Extracranial carotid artery aneurysms are uncommon and may occur due to many etiologies. The reported incidence of extracranial carotid artery aneurysms (ECCA) is about 0.8-1% of all arterial aneurysms and about 4% of all peripheral arterial aneurysms.² Though debated, atherosclerosis has been reported as the commonest aetiology for ECAA.³ Moreover, arterial hypertension and its frequent concomitant, atheroma, are important factors in the initiation, growth, and rupture of aneurysms.⁴ The present case has a long-standing history of hypertension with irregular medication. Aneurysms can arise at any time in life, especially between the ages of 30 and 70, and increase rapidly in size, though they may do so slowly. This makes the onset of hypertension at any age a possible factor in the initiation as well as the enlargement of

aneurysms.⁵ Further, evidence of the atherosclerotic changes was well evident from the histopathological examination of the cut section. The degree of arterial narrowing from atherosclerosis might not be sufficient to cause sudden death, but the complications of atherosclerosis may be responsible for further sudden. Sudden death in a hotel room had raised suspicions of foul play in this case. A meticulous autopsy helped in establishing the cause and nature of death.

Conclusion: Symptomatic aneurysms are easily diagnosed clinically. However, subclinical aneurysms may be misdiagnosed/missed. The present case, an extracranial carotid aneurysm, is an uncommon entity. This has been presented considering its rarity.

Ethical Issues: Ethical clearance is taken from Research Ethics Board Committee, RIMS, Imphal.

Source of funding- Nil

Conflict of Interest - Nil

References:

1. Mohan IV, Stephen MS. Peripheral arterial aneurysms: open or endovascular surgery?. Progress in cardiovascular diseases. 2013 Jul 1;56(1):36-56.
2. El-Sabrouh R, Cooley DA. Extracranial carotid artery aneurysms: Texas Heart Institute experience. J Vasc Surg 2000; 31:702-12. Comment in: p. 823-5.
3. Moreau P, Albat B, Thévenet A. Surgical treatment of extracranial internal carotid artery aneurysm. Ann Vasc Surg. 1994 Sep;8(5):409-16. doi: 10.1007/BF02133059. PMID: 7811577.
4. Crompton MR. The pathogenesis of cerebral infarction following the rupture of cerebral berry aneurysms. Brain. 1964 Sep 1;87(3):491-510.
5. Graf CJ, Hamby WB. Report of a case of cerebral aneurysm in an adult developing apparently de novo. Journal of Neurology, Neurosurgery, and Psychiatry. 1964 Apr;27(2):153.

Disclaimer/Publisher's Note: The information statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of IJMJ and/or the editor(s). IJMJ and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any innovation, ideas, methodology, instructions, conclusions, or products referred to in the content.

Copyright: © 2023 by the authors. Licensee GLAFIMS ASSOCIATION, Aligarh, India. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)



Figure 1: Showing removal of big bovine heart(0.6kg)

Figure 2: Showing Left Anterior Descending Artery occlusion, a branch of the Left Coronary Artery.

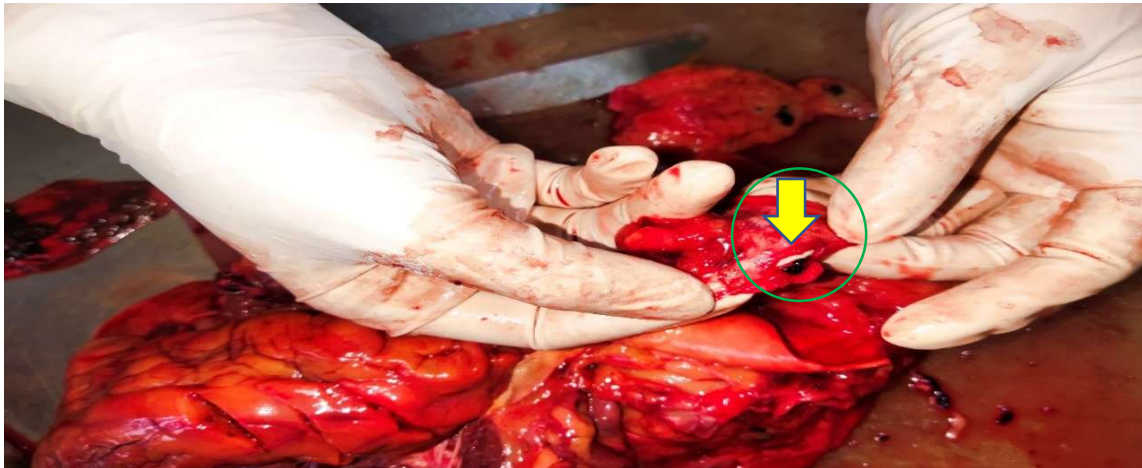


Figure 3: Showing Full thickness transverse tear seen over the left common carotid artery.

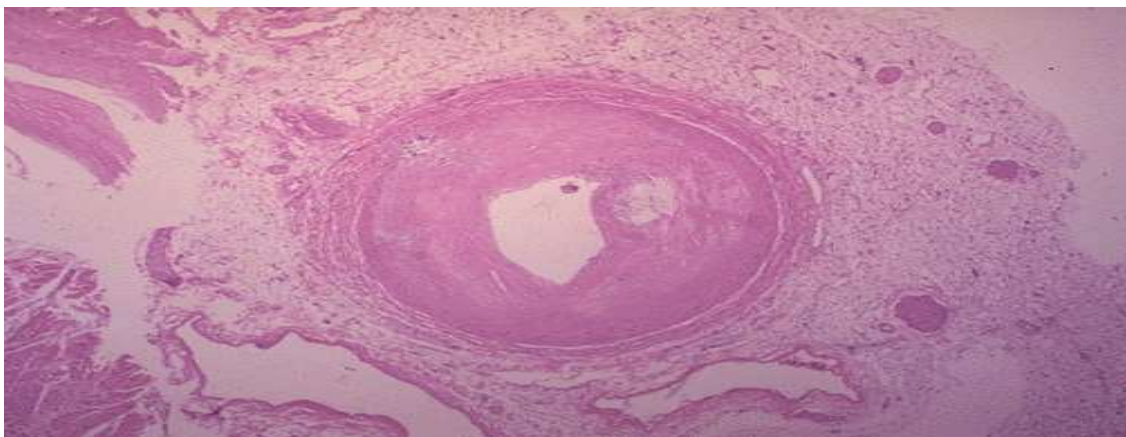
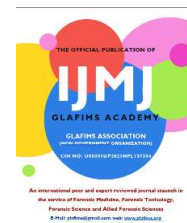


Figure 4: Showing left coronary artery atherosclerotic change with 50% occlusion.



Content list available at ijmj.net
**International Journal of
Medical Justice**

Journal Homepage: <https://www.ijmj.net>



Review Article

The POCSO ACT 2012 : Stop the Abuse , Stop the Cruelty , Stop the Slaughter !

Perumal P*, Ravindra S Honnungar**, Lakshmibharathi M***

*Post graduate student, MD Forensic Medicine and Toxicology, Jawaharlal Nehru Medical College, KAHER, Belagavi, Karnataka

**Professor and Head , Department of Forensic Medicine and Toxicology, Jawaharlal Nehru Medical college, KAHER, Belagavi, Karnataka

***Postgraduate, Department of General Medicine, Madurai Medical College, Madurai, Tamil Nadu

Article History:

Date of Submission: Saturday December 31, 2022

Date of Revision: Wednesday January 11, 2023

Date of Acceptance: Friday January 13, 2023


Date of Publication: Sunday January 15, 2023

Digital Object Identifier [DOI]: <https://doi.org/10.5281/zenodo.7536871>

Available Online: Thursday January 26, 2023

Website Archive: <https://www.ijmj.net/archive/2023/1/1/IJMJ-2023-15.pdf>

Citation: Perumal P, Ravindra S Honnungar, & Lakshmibharathi M. (2023). The POCSO ACT 2012 : Stop the Abuse , Stop the Cruelty , Stop the Slaughter !. International Journal of Medical Justice, 1(1), 32-48. <https://doi.org/10.5281/zenodo.7536871>

Indexing: Indexed in 

Keywords: The POCSO Act; Child Abuse; Medical Examination; Doctors; Mandatory reporting.

Academic Editors: Dr Seema Sutay, Dr Pooja Rastogi

Corresponding Author:

Dr Perumal P

Post graduate student,

MD Forensic Medicine and Toxicology,

Jawaharlal Nehru Medical College, KAHER, Belagavi, India

Email: perumalp632@gmail.com

© by GLAFIMS ASSOCIATION. All rights reserved.

Abstract: In India, Child sexual abuse (CSA) is a major issue in terms of public health. First contacts with abused children and their families are frequently made by pediatricians and other medical specialists. By offering immediate and ongoing care and assistance to the victims and their families, doctors play a crucial part in the detection of child sexual abuse. The Protection of Children from Sexual Offences (POCSO) Act, 2012 was enacted by the Government of India to provide an extremely strong legal framework for the protection of children from offences of sexual assault, sexual harassment and pornography, by incorporating child friendly mechanisms for reporting, recording of evidence, investigation and speedy trial of offences through designated Special Courts. The clinical examination of child sexual abuse, as well as its prevention, management, and reporting, need pediatricians and other health care providers to develop the necessary expertise. Regarding securing the future of our children, the law has also developed recently. But there hasn't changed much in terms of public awareness of this problem. In order to better understand this societal evil, the rights of

our children and role of doctors, we aim to be as clear as possible in this paper.

Key words: The POCSO Act; Child Abuse; Medical Examination; Doctors; Mandatory reporting.

INTRODUCTION: With a child who is unable to understand or give consent, child sexual abuse as a coercive act can cause serious physical or psychological harm. The POCSO Act, 2012 in India, is a landmark law enacted in India on November 14, 2012 to protect the best interest and well-being of the children from all forms of sexual offenses such as sexual assault, sexual harassment, using the child for pornographic purpose, and abetment to commit such offense. Under this act, a comprehensive definition is given to all forms of sexual crimes and exploitation against children below the age of 18 years. As a supreme legislation, this act ensures safeguarding the best interest of the child at every stage of the judicial process through its child-friendly mechanisms in terms of reporting, recording of evidence, investigation, and speedy trial of offenses through designated Special Courts[1,2,3].The latest amendment to this act was done in 2019[4].The term "Child Sexual Abuse" refers to a variety of sexual behaviours, including

molestation, sodomy, exhibitionism, pornography, and cyber-sexual actions, as well as improper physical contact with a child or allowing the child to touch the victim's private areas. In this whole process the advantage is taken by an adult with the child. The POCSO Act of 2012, a gender-neutral law, set the legal age of consent at 18 for both boys and girls. Consensual sexual act with children by any person is illegal. When the severity of the punishment for sexual offences is in consideration, the Indian law discriminates against women depending on their age. Children between 5 and 12 years were found to be more at risk. Image 1 shows State/UT wise cases registered under POCSO ACT in the year of 2018 to 2020. The most vulnerable among them were those homeless on the streets, children recruited for child labour, and those in institutional care.[5] Goal participants of the POCSO act are Forensic Surgeon, Emergency Physicians, Psychiatrists, Paediatricians/Gynaecologists, Mental health Professionals, Child Welfare Committee, Advocates/Judicial officers.

Risk component: A potential risk factor identified is the concept of intergenerational transmission which showed that victims of

child abuse during childhood later became the perpetrators of the same in their adulthood, thus forming a vicious cycle. In the same study, a childhood abuse potential (CAP) score has been deduced, considering their past history of child abuse. A strong predictor of CAP was also thought to be post-traumatic stress caused by intimate partner violence, its severity. [6]

Sexual abuse involves forcing, leading, or enticing anyone below the age of 18 years to participate in sexual activity of any kind, irrespective of the awareness of consequences. Activities could range from contact activities such as intercourse, buggery, oral sex, or could be non-contact activities such as watching pornographic materials or encouraging to behave in a sexually inappropriate way. [7]

The Protection of Children from Sexual Offences (POCSO) Act, 2012 Sexual offences -defined under THE POCSO ACT

- Penetrative sexual assault (S.3)
- Aggravated penetrative sexual assault (S.5)
- Sexual assault (S.7)
- Aggravated sexual assault (S.9)
- Sexual harassment (S.11)
- Using a child for pornographic purposes (S.13)

- Sexual offences - Punishment under THE POCSO ACT
- Penetrative sexual assault (S.3) - (S.4)
- Aggravated penetrative sexual assault (S.5) - (S.6)
- Sexual assault (S.7) - (S.8)
- Aggravated sexual assault (S.9) - (S.10)
- Sexual harassment (S.11) - (S.12)
- Using a child for pornographic purposes (S.13) - (S.14)

Refer Image 1: State/UT wise cases registered under POCSO ACT in the year of 2018 to 2020. [17]

Refer Image 2: Flow chart to handle cases registered under POCSO ACT.[18]

Refer Image 3: Recording of statement of a child by police to handle cases registered under POCSO ACT. [18]

Role of Healthcare Professional:
One of our main responsibilities is to safeguard our children and we have a social obligation to act quickly when there are instances of child abuse that are obvious. Healthcare Professional should recognise child sexual abuse and situations and intervene quickly.

Refer Image 2 shows Flow chart to handle cases registered under POCSO ACT, and Image 3 shows Recording of statement of a child by police to handle cases

registered under POCSO ACT to ensure the child friendly environment.

Refer Image 4: Procedure for Medical Professionals to handle cases registered under POCSO ACT. [18]

Vaginal bleeding, itching, discharge, or rectal bleeding could be important clues to further investigate. Children exposing excessive awareness about sexual activities which is unexpected for that age or enacting sexualized behaviour should also be considered seriously.[7]

In most cases, children do not complain about such events directly and comes to light when they are identified in pornographic materials, be pregnant, or have a sexually transmitted disease with no clear explanation. Head, face, and mouth should be thoroughly examined since injuries in these areas account for around 60% of the lesions noted. Within the mouth, injuries on frenulum, tongue, mucosa, and lips are the most common.[8]

Pierce et al. had suggested a mnemonic "TEN-4" which stands for Torso, ears, neck, and 4 stands for the age of 4 years. According to this, any bruises in these areas occurring during the first four years of life should

raise suspicion in the minds of primary physicians. It was further enhanced to "TEN FACE sp," whereby any injury to Frenulum, Angle of jaw, Cheeks, Eyelids along with Sub-conjunctival haemorrhage and Patterned bruises were also added. This rule of thumb was 97% sensitive and 87% specific in predicting abuse.[9] Apart from identifying these tell-tale signs, it is also important for a primary care physician to take an elaborate history from the parents and the child both together and individually. Any discrepancy could be an alarm toward a possibility of maltreatment. Observing the family relationship could also provide few clues. Socioeconomic status is never a factor, since children from all strata of society have been noticed to be victims of this evil.[10]

Indian doctors' current situation Various initiatives and legislative acts, including the Indian penal code 1860, the Immoral Traffic (Prevention) Act, 1956, the Protection of Children against Sexual Offences (POCSO) Act 2012, etc., are being implemented in the country for addressing the issue of Child Abuse. Despite that, the prevalence of all forms of child abuse which includes physical

abuse (66%), sexual abuse (50%) and emotional abuse (50%), is extremely high in India as per a survey conducted by the Government of India, Ministry of Women and Child Development (2007).[11]

Study conducted by the National Commission for Protection of Child Rights (NCPCR) shows, 6,632 children's respondents in seven states, revealed 99% of children face corporal punishment in schools. [12]

India is a country of youth, where more than forty percent of its population is below the age of 18 years. In fact, 19% of the world's children live in India. [13]

When providing treatment, doctors and nurses should keep the risk of child abuse in mind, seek any required consultations, and keep the child under surveillance if they are unable to reach a conclusion.

Child abuse, requires multi-disciplinary support from medical, legal, psychological and sociological dimensions. Here, the role of healthcare professionals is vital to not only detect abuse but also to inform relevant interventions. [14]

Some of the major challenges reported by healthcare professionals to report child

abuse are lack of knowledge, inadequate experience, the uncertainty of diagnosis, poor communication, fear of disconnecting therapeutic relationships, etc. [15]

In many cases, reporting was not done by clinicians in spite of knowing about the abuse, since they thought that the repercussions it may have on the child and the family would be devastating. Few clinicians also avoided reporting because of the intricacies in the legal formalities which could disrupt their smooth practice. [16]

INFORMED WRITTEN CONSENT OF THE VICTIM

For the following reasons, the parent or legal guardian of the minor victim's consent may be required:

1. Examination,
2. Sample collection for forensic and clinical analysis,
3. Medical care,
4. Police notification.

Informed consent the individual providing the consent should be informed about the purpose, anticipated risks, side effects, and advantages of the examination, as well as how long it would take. Under three conditions, a child victim and their family may visit a medical facility, and informed consent must be obtained.

1) Alone, exclusively for treatment of assault-related injuries;

2) Following a police complaint and a police request; or

3) In response to a court order. Even if the parent or child declines to allow a medical evaluation, you may still treat them medically.

According to the law, a child who needs reproductive health care can give consent and must get a guarantee of secrecy. The patient's Consent must be given knowingly. Parents, guardians, or a surrogate decision-maker must consent if the patient is unable to give informed consent.

CHILD SEXUAL ABUSE EARLY MANAGEMENT

➤ Emergency medical care must be provided without any charge.

➤ Neither a document nor a prerequisite are required.

➤ The victim should go straight to a medical facility for care, with a police request following a police report, or under court order

➤ Depending on the patient's age, the hospital must administer care and perform a medical examination with the patient's Consent.

➤ The victim has to be examined and treated for their

injuries, whether or not they choose to report it.

➤ In certain situations, the doctor is required by law to notify the authorities.

IMMEDIATE MEDICAL ATTENTION

As soon as the police receive a report of an offence committed against the child, the child must be sent to the hospital for emergency medical care.

➤ Medical attention for any genital injuries as well as cuts, bruises, and other wounds

➤ Prophylaxis for diagnosed STDs as well as therapy for exposure to sexually transmitted infections (STDs)

➤ Following any appropriate consultation with infectious disease specialists, therapy for exposure to the Human Immunodeficiency Virus (HIV), including HIV prophylaxis

➤ The pubertal child's parent or any other adult in whom the child has faith and trust should be consulted on any potential pregnancy and emergency contraceptives.

➤ Doctor must give emergency contraception and advise the patient about it.

➤ Whenever necessary, counselling for mental or psychological health or other

issues should be referred to or consulted.

➤ Any forensic evidence must be gathered in conformity with section 27 of the Act while emergency medical services are being provided.

➤ Girl child should have pregnancy tests. A urine test is just as precise and sensitive as a blood test as well as patient-friendly

➤ In order to help the kid and family throughout the evaluation and for thorough care of CSA, mental health specialists play a crucial role.

➤ Psycho-emotional discomfort and a propensity for self-harming conduct are risks for CSA victims.

➤ Experts can provide the child counselling and assist in easing the emotional toll of trauma.

➤ It is necessary to take the proper precautions to stop abuse, trauma, and re-victimization.

What does a forensic examination serve to prove?

➤ Whether a sexual act has been performed or attempted.

➤ Sexual activities include any non-consensual sexual contact, including the genital, anal, or oral penetration by the penis, fingers, or other items.

➤ However, the lack of injuries does not always mean that there was no attack or that the child gave his or her consent.

➤ Whether such a sexual act was just recently.

➤ If the child's body has been injured in any way.

➤ In the case of adolescent females or boys, the age of the child ,Whether the Child has received alcohol or drugs

DUTY PRESCRIBED BY LAW

Section 27- Medical Examination:

(1) The medical examination of a child in respect of whom any offence has been committed under this Act, shall, notwithstanding that a First Information Report or complaint has not been registered for the offences under this Act, be conducted in accordance with section 164A of the Code of Criminal Procedure, 1973.

(2) In case the victim is a girl child, the medical examination shall be conducted by a woman doctor.

(3) The medical examination shall be conducted in the presence of the parent of the child or any other person in whom the child reposes trust or confidence.

(4) Where, in case the parent of the child or other person referred to in sub-section [3]

cannot be present, for any reason, during the medical examination of the child, the medical examination shall be conducted in the presence of a woman nominated by the head of the medical institution

MEDICAL EXAMINATION

According to Section 27 of the POCSO Act, 2012 and Section 164A of the CrPC, 1973, a medical examination to be done.

An examination must be carried out by a registered physician working in a hospital run by the government or a local authority, or, in the absence of one, by any other registered physician, with the child's consent or the consent of a person authorised to act on her behalf.

Within twenty-four hours of receiving the information about the commission of the offense, the woman must be sent to the registered medical practitioner.

The Registered doctor who receives the child must examine her without delay and write up a report of the findings that includes the information listed below:

1. The Child's name and address, as well as those of the person who brought her
2. The Child's age
3. A description of the samples of the Child's body used for DNA profiling

4. Any visible signs of harm on the Child's body

5. The Child's overall mental health

6. Additional significant details that are reasonably detailed.

- The report must expressly state, that the child or the person authorized to provide Consent on her behalf had given their assent to the examination.

- The report must also include the precise commencement time and completion time of the examination. The registered medical practitioner must provide the report to the investigation officer as soon as possible. The investigation officer will then send it along with the other papers mentioned in clause (a) of subsection (5) of section 173 to the Magistrate mentioned in that section.

- Nothing in this section should be interpreted as approving an examination without the woman ' s consent or the consent of a representative who is competent to give such consent on her behalf.

- According to the POCSO Act of 2012, the phrase "woman" in the legal clause above may be replaced by the term "child"

- The doctor is required under POCSO to notify the police if a

minor victim arrives on their own without filing a police report but may need medical attention (Section 20). No aspect of the examination should be conducted with police officers in present.

NEVER SUBJECT VICTIMS OF SEXUAL ASSAULT TO THE " TWO FINGER TEST".

NO RELATIONSHIP EXISTS BETWEEN THE CURRENT INSTANCE OF SEXUAL VIOLENCE AND PREVIOUS SEXUAL EXPERIENCES.

MODALITIES OF CHILDREN'S MEDICAL EXAMINATION:

The doctor's responsibilities may include:

1) Having a thorough understanding of sexual victimisation;

2) Obtaining the child's medical history in a supportive, non-judgmental, and empathic way;

3) Meticulously recording historical information;

4) Conducting a thorough examination to diagnose acute and chronic residual trauma and STDs, and to collect forensic evidence;

5) Considering a differential diagnosis of behavioural complaints and physical signs that may mimic sexual abuse;

6) Preparing a comprehensive medical report that includes a diagnosis and treatment suggestions

7) Testifying in court when necessary

WHEN A DOCTOR CAN HAVE SEXUAL ABUSE SUSPICIONS:

1. When a young person complains of something that might be directly connected to the likelihood of sexual assault, such a girl child with a vaginal discharge.
2. When a child has no complaints, but a doctor notices an unexpected finding- like an enlarged hymenal ring
3. when a child complains of something other than the potential for sexual assault, such abdominal pain or encopresis (soiling);

MANDATORY REPORTING:

- A doctor is expected to inform the proper authorities (i.e., the police or the right person within his or her organisation, who will then have to report it to the police) when they have cause to think that a child has been or is currently being sexually assaulted.
- Failure to do this would result in imprisonment of up to six months, with or without fine. (Sec21)
- Any person, being in-charge of any company or an institution who fails to report the commission of an offence shall be punished with imprisonment for a term which may extend to one year and with fine.

COMPLETING A MEDICAL HISTORY

- 1) Before starting the child's check-up, the doctor must obtain a comprehensive medical history of the patient's experiences.
- 2) The physician must keep in mind that the diagnosis of child sexual abuse frequently relies more on the patient's medical history than on objective physical evidence.
- 3) The physical examination will be based on the patient's medical history.
- 4) Its goal is to help with therapy and diagnosis while also ensuring the child's safety, not to gather data for forensic purposes.

TECHNIQUES FOR INTERVIEWS

1. An investigative tone shouldn't be used throughout the interview.
2. To get a thorough paediatrics history, pertinent questions need to be asked.
3. Assess the child's attention span, comfort level, and language and cognitive skills.
4. Keep a written record of the questions posed and the child's replies, as well as notes on the child's body language, demeanor, and emotional reactions to the questions.
5. It is important to record menstruation history, comprehensive medical history, and any instances of maltreatment

or suspicious injuries in the past.

6. Ask the child to identify bodily parts, such as the names of the genitalia and the anus use an anatomically appreciate diagram.

7. Detail the results and place them on the diagram.

Please Refer Image 5: Images for ask the child to identify bodily parts

8. Include in your inquiry a variety of forms of touching, such as kisses, hugs, tickles, spankings, and pinches or bites.

9. Ask about any other instances (locations) it may have occurred and use the diagram to cover any potentially abusive touches.

10. Avoid leading and suggestive questions;

11. Instead, stick to a "tell-me-more" or "and-then-what-happened" style of questioning.

12. Refrain from displaying strong emotions like astonishment or dismay.

COLLECTION AND PRESERVATION OF EVIDENCE - SAFE Kit

1) Perform a complete medical and forensic examination since repeated exams cause important evidence to disappear.

2) Keep the clothing and any pertinent items the child was wearing when the incident occurred.

3) Before washing, cleaning, or before the child defecates or urinates, gather materials, swabs, and samples from hair, nails, body surfaces, orifices, or any products of conception for DNA profiling and forensic evidence.

4) Gather blood samples to check for alcohol and blood type.

5) Make that samples and materials being given over for forensic investigation are properly labelled, stored, preserved

6) CHAIN OF CUSTODY SHOULD BE ESTABLISHED.

MEDICAL OUTLAYS COMPENSATION

As stated in Section 33(8)

1. Direct payment of any compensation required by the child's prescription for any bodily or psychological harm

2. Compensation be provided not only at the conclusion of the trial but also on an interim basis, to satisfy the immediate needs of the child for relief or rehabilitation at any point.

3. When determining the amount of compensation to be provided, consider the seriousness of the child's bodily or mental sufferings or injury.

Please Refer Image 6: Punishments for sexual assault cases registered under POCSO ACT. [19]

MEDICO-LEGAL AND ETHICAL ISSUES

1) The POCSO Act mandates the reporting of sexual offences

committed against children, making it necessary for any adult, including a doctor or other health care provider, who knows that a child has been sexually assaulted to do so (Sections 19, 20, 21).

2) He or she is not required to look into the incident or even know who the offender is.

3) The police and other investigating authorities should handle this. The Special Juvenile Police Unit or the neighbourhood police station may receive the report.

4) No reports in any media shall disclose, the identity of a child including his name, address, photograph, family details, school, neighbourhood or any other particulars which may lead to disclosure of identity of the child

5) As an alternative, the informant can call the Child Helpline at the toll-free number 1098 in India, where someone will help them with the report.

ONE STOP CENTERS (OSC)

The Ministry of Women & Child Development, Govt. of India is establishing One Stop Centres (OSC) to provide support and assistance to victims of gender violence.

There are further provisions to preserve the confidentiality and to conduct trial through camera.

As a result, complete services including medical, police, psychological therapy, legal help, housing, referral services, and video conferencing facilities are offered "under one roof".

POCSO Related Initiatives

1. Child Abuse Prevention and Investigation Unit

2. Juvenile Justice Act/Care and Protection Act, 2000

3. Beti Bachao, Beti Padhao

4. Child Labour Prohibition and Regulation Act, 2016

5. Child Marriage Prohibition Act (2006)

Conclusion

The prevalence of child abuse instances in our nation may be decreased as a result of all these efforts. More research on the economic effects of child abuse, such as child trafficking, child labour, commercial sexual exploitation, the direct financial costs of abused children seeking medical attention, and the relationship between socioeconomic factors and child protection will go a long way toward persuading governments to fund local child protection and prevention services.

Increasing awareness and understanding regarding child abuse through ongoing education initiatives in order to find solutions to the issues encountered throughout the

diagnostic and reporting process
A crucial initial step is the creation of a multidisciplinary team made up of professionals from many professions who have obtained the requisite training regarding child abuse, and this team's review of the cases.

To enhance the diagnosis and reporting of CSA, all healthcare professionals urgently need to maintain their education and advances. The benefits to the child should always come first when evaluating a case of child abuse. Physicians and nurses should have actual training in the procedures that must be followed for these situations in polyclinics and emergency rooms. There is a need to concentrate on preventative measures in addition to managing child abuse instances.

Acknowledgements: I express my gratitude to All My respected Professors for their constant support and guidance.

Ethical clearance: A prior approval was obtained from the Institutional Ethics Committee.

Conflict of interest: None to declare

Source of funding: None to declare

References

1) Swagata R, Anuroopa G, Geeta S, et al. Frequently asked questions on the Protection of Children from Sexual Offences Act, 2012, and the Criminal Law (Amendment) Act, 2013.

Bengaluru: National Printing Press, 2015

2) Belur J and Singh BB. Child sexual abuse and the law in India: a commentary. *Crime Sci* 2015; 4: 26.

3) Ministry of Women and Child Development GoI. Model guidelines under section 39 of the Protection of Children from Sexual Offences Act, 2012 for the use of professionals and experts. Ministry of Women and Child Development GoI, 2013, 75

4) India TGo. The Protection of Children from Sexual Offences (Amendment) Act, 2019. In: Department) MolajL, (ed.), 2019.

5) Veena AS, Chandra PS. A review of the ethics in research on child abuse. *Indian J Med Ethics* 2007; 4:113-5.

6) Anderson RE, Edwards LJ, Silver KE, Johnson DM. Intergenerational transmission of child abuse: Predictors of child abuse potential among racially diverse women residing in domestic violence shelters. *Child Abuse Negl* 2018;85:80-90.

7) Lissauer T, Carroll W, editors. *Illustrated Textbook of Paediatrics*. Elsevier Health Sciences London, United Kingdom; 2017.

8) Murali P, Prabhakar M. Mantle of forensics in child sexual abuse. *J Forensic Dent Sci* 2018;10:71.

9) Pierce M, Kaczor K, Lorenz D, Makoroff K, Berger RP, Sheehan K. Bruising clinical decision rule (BCDR) discriminates physical child abuse from accidental trauma in young children. In *Pediatric Academic Societies' Annual Meeting* 2017.

10) Inanici SY, Çelik E, Hıdıroğlu S, Özdemir M, İnanıcı MA. Factors associated with physicians' assessment and management of child abuse and neglect: A mixed method study. *J Forensic Legal Med* 2020;73:101972.

11) Ministry of Women and Child and Government of India. Study on child abuse India. 2007. Available from: <https://cjp.org.in/wp-content/uploads/2017/11/MWCD-Child-AbuseReport.pdf>.

12) Agrasa . Choking Child hood-School Corporal Punishment," 2018. Available from: <https://agrasar.org/corporal-punishment/>.

13) National Institute of Urban Affairs. Status of Children in Urban India: Baseline Study 2016. Available from: <https://>

smartnet.niua.org/sites/default/files/resources/status1.pdf

14) Maul KM, Naeem R, Khan UR, Mian AI, Yousafzai AK, Brown N. Child abuse in Pakistan: A qualitative study of knowledge, attitudes and practice amongst health professionals. Child Abuse Negl 2019;88:51-7.

15) Azizi M, Shahhosseini Z. Challenges of reporting child abuse by healthcare professionals: A narrative review. J Nurs Midwifery Sci 2017;4:110.

16) Kalichman SC, Brosig CL. Practicing psychologists' interpretations of and compliance with child abuse reporting laws. Law Hum Behav 1993;17:83-93.

17) GOVERNMENT OF INDIA MINISTRY OF HOME AFFAIRS; Publishes statistical data on crimes in its publication "Crime in India" (Internet). Available from: (Internet). Available from: <https://www.mha.gov.in/MHA1/Par2017/pdfs/par2022-pdfs/LS-29032022/377.pdf>

18) User handbook on protection of children from sexual offences act, 2012; The Pune Municipal Corporation (Internet). Available from:

<https://www.pmc.gov.in/sites/default/files/69301171.pdf>

19) What is POCSO (Amendment) Bill 2019?; indiatoday magazine (Internet). Available from: <https://www.indiatoday.in/education-today/gk-current-affairs/story/what-is-pocso-amendment-bill-2019-divd-1595473-2019-09-04>

Disclaimer/Publisher's Note: The information statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of IJMJ and/or the editor(s). IJMJ and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any innovation, ideas, methodology, instructions, conclusions, or products referred to in the content.

Copyright: © 2023 by the authors. Licensee GLAFIMS ASSOCIATION, Aligarh, India. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

State/UT-wise Cases Registered (CR) under Protection of Children from Sexual Offences Act (Secs.4&6 r/w sec. 376 IPC and 8&10 r/w sec. 354 IPC) during 2018-2020							
Sl.	State/UT	2018		2019		2020	
		POCSO Act (Section 4 & 6) r/w Section 376 IPC	POCSO Act (Section 8 & 10) r/w Section 354 IPC	POCSO Act (Section 4 & 6) r/w Section 376 IPC	POCSO Act (Section 8 & 10) r/w Section 354 IPC	POCSO Act (Section 4 & 6) r/w Section 376 IPC	POCSO Act (Section 8 & 10) r/w Section 354 IPC
		CR	CR	CR	CR	CR	CR
1	Andhra Pradesh	241	46	265	62	272	102
2	Arunachal Pradesh	18	4	22	11	17	9
3	Assam	1224	372	1263	362	1049	322
4	Bihar	824	946	721	507	628	646
5	Chhattisgarh	1214	499	1377	580	1535	469
6	Goa	0	1	0	0	0	0
7	Gujarat	1456	407	1539	340	1871	274
8	Haryana	1068	641	1174	654	1101	545
9	Himachal Pradesh	22	3	1	4	0	2
10	Jharkhand	442	113	469	132	681	165
11	Karnataka	1408	361	1623	355	1601	337
12	Kerala	162	222	113	749	1273	509
13	Madhya Pradesh	1047	1307	3337	2669	3259	2260
14	Maharashtra	2832	3235	3117	2785	2705	2705
15	Manipur	28	13	47	9	55	14
16	Meghalaya	179	78	145	61	251	64
17	Mizoram	73	62	36	41	61	41
18	Nagaland	6	3	10	2	15	2
19	Odisha	1427	91	1417	72	1629	523
20	Punjab	288	85	232	122	549	138
21	Rajasthan	74	34	4	3	2	5
22	Sikkim	78	38	61	28	70	24
23	Tamil Nadu	1457	424	1742	474	2229	618
24	Telangana	1140	391	1180	751	1415	555
25	Tripura	76	47	107	63	86	54
26	Uttar Pradesh	2023	3014	3344	3819	2630	3897
27	Uttarakhand	294	23	231	100	396	157
28	West Bengal	1378	627	1469	578	1541	831
TOTAL STATE(S)		20479	13587	25046	15708	27001	15268
29	A&N Islands	52	15	83	5	105	9
30	Chandigarh	1	1	1	4	0	0
31	D&N Haveli and Daman & Diu	18	4	47	3	39	2
32	Delhi	994	687	969	604	721	376
33	Jammu & Kashmir**	13	14	75	19	152	24
34	Ladakh	-	-	-	-	0	0
35	Lakshadweep	1	3	14	7	3	3
36	Puducherry	47	9	48	0	44	10
TOTAL UT(S)		1126	733	1237	642	1064	424
TOTAL (ALL INDIA)		21605	14320	26283	16350	28065	15692

Source: Crime in India

Note : * Combined data of erstwhile D&N Haveli UT and Daman & Diu UT for 2018

** Data of erstwhile Jammu & Kashmir State including Ladakh for 2018

Image 1: State/UT wise cases registered under POCSO ACT in the year of 2018 to 2020. [17]

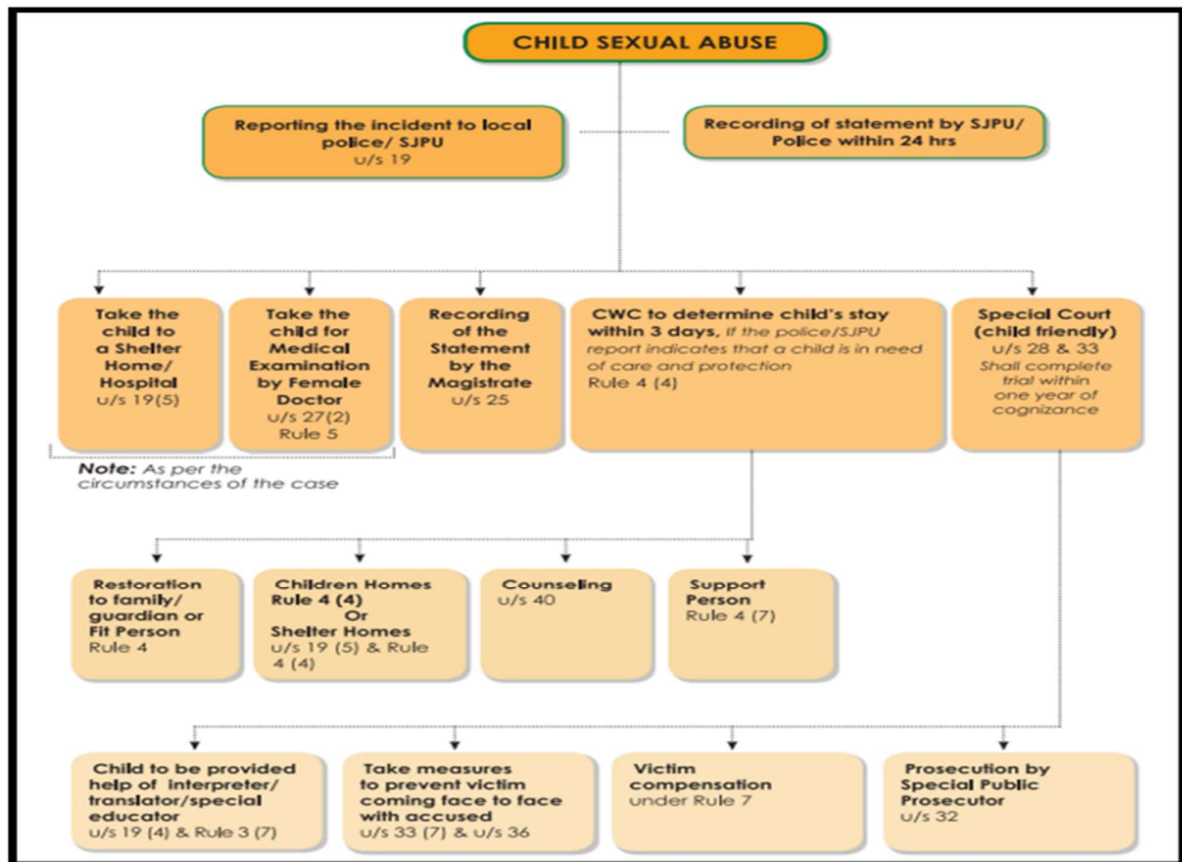


Image 2: Flow chart to handle cases registered under POCSO ACT. [18]

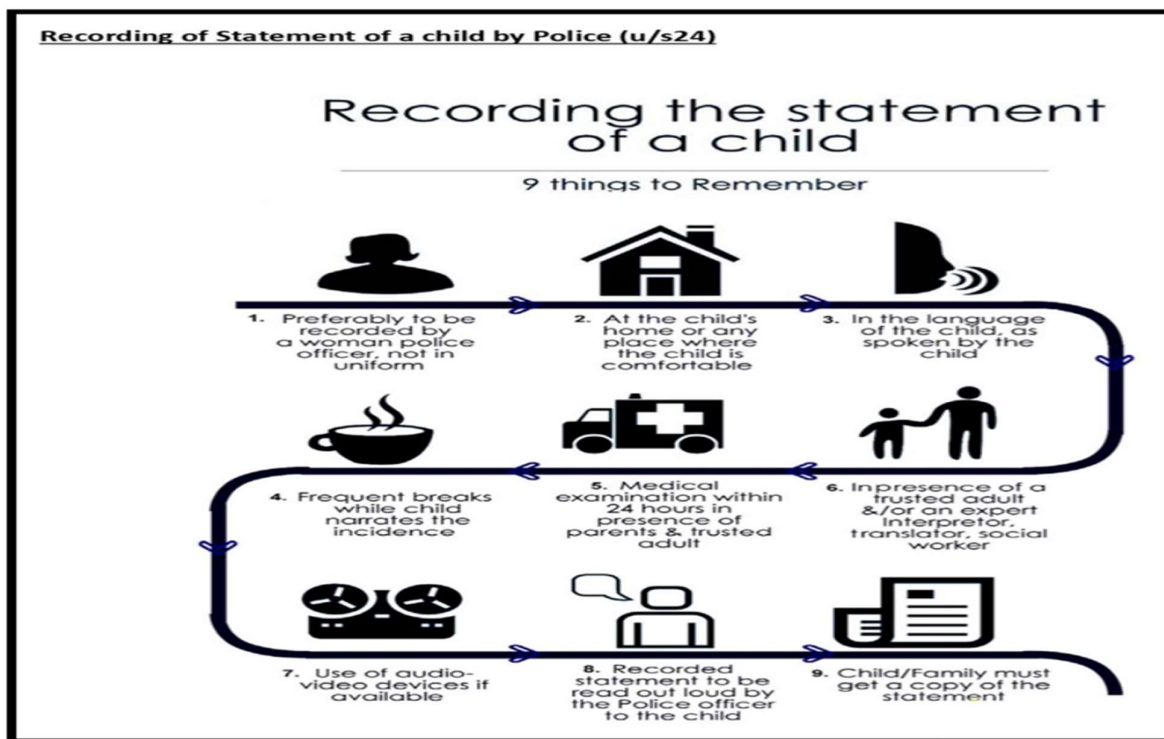


Image 3: Recording of statement of a child by police to handle cases registered under POCSO ACT. [18]

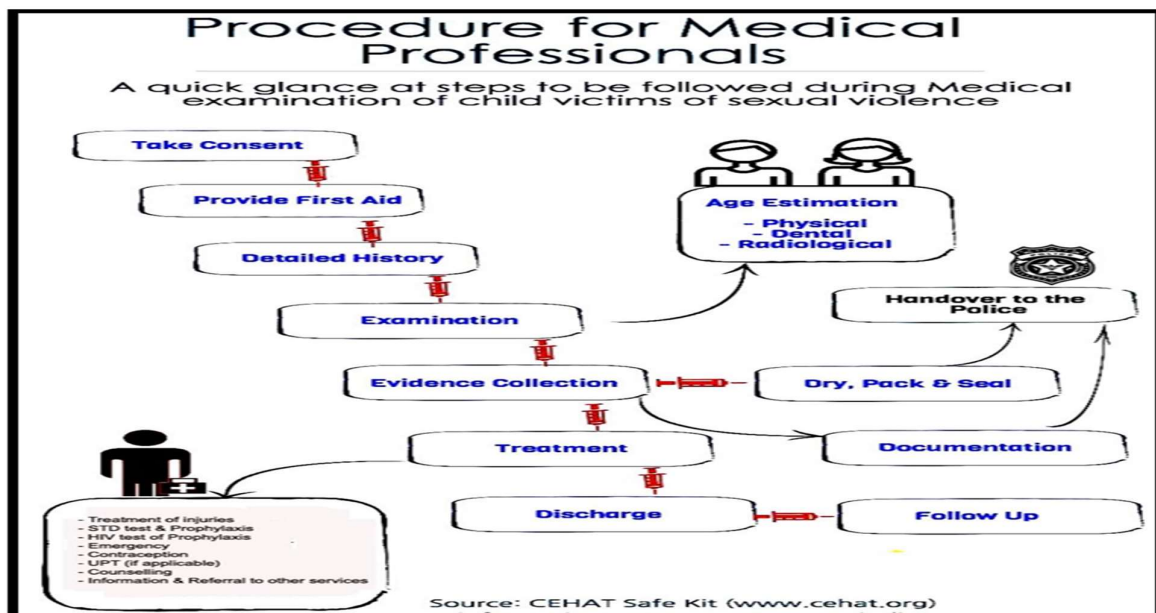


Image 4: Procedure for Medical Professionals to handle cases registered under POCSO ACT. [18]

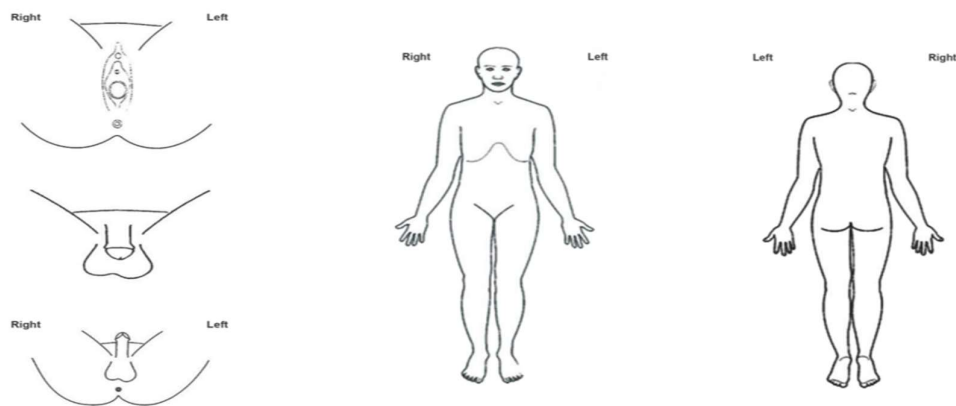


Image 5: Images for ask the child to identify bodily parts

Offence	POCSO Act, 2012	2019 Bill
Use of child for pornographic purposes	<ul style="list-style-type: none"> Maximum: 5 years 	<ul style="list-style-type: none"> Minimum: 5 years
Use of child for pornographic purposes resulting in penetrative sexual assault	<ul style="list-style-type: none"> Minimum: 10 years Maximum: life imprisonment 	<ul style="list-style-type: none"> Minimum: 10 years (in case of child below 16 years: 20 years) Maximum: life imprisonment
Use of child for pornographic purposes resulting in aggravated penetrative sexual assault	<ul style="list-style-type: none"> Life imprisonment 	<ul style="list-style-type: none"> Minimum: 20 years Maximum: life imprisonment, or death.
Use of child for pornographic purposes resulting in sexual assault	<ul style="list-style-type: none"> Minimum: Six years Maximum: Eight years 	<ul style="list-style-type: none"> Minimum: Three years Maximum: Five years
Use of child for pornographic purposes resulting in aggravated sexual assault	<ul style="list-style-type: none"> Minimum: Eight years Maximum: 10 years 	<ul style="list-style-type: none"> Minimum: Five years Maximum: Seven years

Image 6: Punishments for sexual assault cases registered under POCSO ACT. [19]





Content list Available at ijmj.net

International Journal of Medical Justice

Journal Homepage: <https://www.ijmj.net>



Review Article

A roadmap for saviours: role of doctors in medicolegal care in relation to POCSO ACT

Dhananjay Kumar*, Satish Kumar Khalkho**, S.K. Pandey***

*Junior Resident III, **Senior Resident, *** Professor & Head,
Department of Forensic Medicine, Institute of Medical Sciences, Banaras
Hindu University, Varanasi

Article History:

Date of Submission: Saturday December 31, 2022

Date of Revision: Wednesday January 11, 2023

Date of Acceptance: Friday January 13, 2023

Date of Publication: Sunday January 15, 2023

Digital Object Identifier [DOI]: <https://doi.org/10.5281/zenodo.7537604>

Available Online: Thursday January 26, 2023

Website Archive: <https://www.ijmj.net/archive/2023/1/1/IJMJ-2023-16.pdf>

Citation: Dhananjay Kumar, Satish Kumar Khalkho, & S.K. Pandey. (2023). A roadmap for saviours: role of doctors in medicolegal care in relation to POCSO ACT. International Journal of Medical Justice, 1(1), 49-57. <https://doi.org/10.5281/zenodo.7536881>

Indexing: Indexed in [OpenAIRE](#)

Keywords: Sexual abuse, POCSO ACT, Doctors.

Academic Editor: Dr Richa Gupta, Dr Suraj Sundaragiri

Corresponding Author:

Dr Dhananjay Kumar

Junior Resident III, Department of Forensic Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi

Email: drdhananjaykumar@bhu.ac.in

© by GLAFIMS ASSOCIATION. All rights reserved.

Abstract: Doctors have a dual role to play in terms of the POCSO Act 2012. They are in a position to detect that a child has been or is being abused and also often the first point of reference in confirming that a child has indeed been the victim of sexual abuse. Studies have shown that doctors are less equipped to deal with POCSO even though they are the first point of contact and first one to report such cases. With cases of sexual offences being reported frequently from across the nation there is need to sensitize doctors not to miss cases and pick up early.

The Ministry of Women and Child Development enacted the Protection of Children from Sexual Offences (POCSO) Act, 2012 in response to the rising incidence of child sexual abuse in India. The Act was beneficial, yet it had many loopholes which paved the way of the Amendment Act of 2019. Thus, the Amendment Act was a highly welcomed legislation.

Objectives: To elaborate on the provisions of POCSO Act, and to explain the doctors on how to identify victims of sexual abuse, how to report cases, how to certify such cases, also what are the limitations of medical

practitioners, to protect the children from exploitation.

Material and Methods: 1. Gazette of India, ministry of law and justice 20 June 2012, The POCSO Act 2012 (India), 2. Gazette of India, ministry of law and justice 06 August 2019, The POCSO (Amendment) Act 2019 (India).3. Ministry of Women and Child Development, Study on Child Abuse India 2007.

Conclusion: While the principles of medical examination and treatment for children remains the same as that for adult sexual victims, it is important for doctors to keep some specific guidelines in mind in relation to children and also to know their limitations and play the role of saviour in prevention of child exploitation.

Keywords: sexual abuse, POCSO ACT, doctors.

Introduction: WHO defines child sexual abuse (CSA) as the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or that violates the laws or social taboos of society.[1]

Child abuse and neglect is a global public health concern [2,3]. It is a prevailing problem

in all generations, socioeconomic strata and societies. In a study carried out by Ministry of Women and Child Development (2007) interviewing 1,25,000 children in 13 Indian states, it was found that sexual abuse had taken place in about half of them [4]. 10,854 cases of child rape were reported from India in 2015, according to National Crime Records Bureau. Several reports indicate that neighbours, friends, close relatives, acquaintances and employers at workplaces are the most common abusers. The Delhi High Court observed that in 2014, of the 1704 cases of rape registered in the capital, 215 cases were instances of incestuous rape. Acts of CSA are usually repeated over longer periods and cause serious short and long term adverse effects [5].

Families, society and intellectuals will have to take the responsibility to prevent child sexual abuse and provide a nurturing environment to protect the future of children. Doctors also have a dual role to play in terms of CSA. They are in a position to detect that a child has been or is being abused and also often the first point of reference in confirming that a child has

indeed been the victim of sexual abuse. Studies have shown that doctors are less equipped to deal with CSA even though they are the first point of contact and first one to report such cases. With cases of sexual offences being reported frequently from across the nation there is need to sensitize doctors not to miss cases and pick up early. Hence, it is important that they acquire the necessary expertise and must be aware of their role in prevention of CSA and the POCSO Act, which clearly mentions their responsibility in the management of CSA. This living document describes the management of CSA, focusing on history taking, physical and sexual examination and medico-legal aspects.

Evolution of POCSO ACT: Fundamental rights of children, need of special care and protection to children, lack of schemes and insufficient budgetary allocations to deal with CSA; all these factors led to formulation of an enabling environment through legislation to address the issue of CSA. Finally, POCSO Act was enacted in 2012 after the Ministry of Women and Child Development conducted a National Study on Child Abuse in India, in 2005

supported by UNICEF and Save the Children. The Report was published under the name of "Study on Child Abuse: India 2007". The Act was designed to protect children from sexual assault, sexual harassment and pornography offences, as well as to provide for the establishment of special courts for the trial of such offences, in response to the rising incidence of CSA in India. The Act was beneficial, yet it had many loopholes which paved the way of the Amendment Act of 2019. The Amendment Act was a highly welcomed legislation by enhancing the punishments for specific offences to deter abusers and ensure a dignified childhood.

Conspiracy of Silence -

Often people feel that this is a western problem, and that CSA does not happen in India. Parents and guardians fear to talk about the matters of CSA. This silence encourages the abuser and they continue to abuse and press their advantage to subject the child to more severe forms of sexual abuse. With cases of sexual offences being reported frequently from across the country, it has become a necessity to sensitize doctors. Doctors should identify victims of

sexual offences early to prevent the offence from being repeated.

Section 164 (A) of the Criminal Procedure Code lays out following legal obligations of the health workers in cases of sexual violence [9].

- ❖ Examination of a case of rape shall be conducted by a RMP employed in a hospital run by the government or a local authority and in the absence of such a practitioner, by any other RMP.
- ❖ Examination to be conducted without delay and a reasoned report to be prepared by the Registered Medical Practitioner [RMP].
- ❖ Record consent obtained specifically for this examination.
- ❖ Exact time of start and close of examination to be recorded.
- ❖ RMP to forward report without delay to Investigating Officer (IO), and in turn IO to Magistrate.

Role of a doctor [6,7] -

1. First-line support-

Emergency medical care shall be rendered in such a manner as to protect the privacy of the child, and in the presence of the parent or guardian or any other person in whom the child has trust and confidence.

No medical practitioner, hospital or other medical facility centre rendering emergency medical care to a child shall demand any legal or magisterial requisition or other documentation as a pre-requisite to rendering such care.

Section 23 of the Criminal Law Amendment Act, which inserts Section 357C into the Code of Criminal Procedure, 1973. This section provides that all hospitals are required to provide first-aid or medical treatment, (1) free of cost, to the victims of a sexual offence.

2. Medical history: The purpose of (2) this is to find out why the child is being brought for health care at the present time and to obtain information about the child's (3) physical or emotional symptoms. The medical history may involve information about the alleged abuse, but only in so far as it relates to health problems or symptoms that have resulted therefrom, such as bleeding at the time of the assault, or constipation or insomnia since that time.

3. Informed consent for examination and evidence collection-

The doctor is expected to explain the procedure to the child and his/ her parents and obtain their consent prior to conducting the

examination, as well as answer any questions they may have. The three main elements of consent are information, comprehension and voluntariness. A rule of thumb is that the physical exam should not cause any trauma to the child.

- The registered medical practitioner, to whom such woman is sent shall, without delay, examine her and prepare a report of her examination giving the following particulars, namely:-
the name and address of the woman and of the person by whom she was brought; the age of the woman;
the description of material taken from the person of the woman for DNA profiling; marks of injury, if any, on the person of the woman;
general mental condition of the woman; and other material particulars in reasonable detail.
- The report shall state precisely the reasons for each conclusion arrived at.
- The report shall specifically record that the consent of the woman or of the person competent to give such consent on her behalf to such examination had been obtained.
- The exact time of commencement and completion of the examination shall also be noted in the report.

- The registered medical practitioner shall, without delay forward the report to the investigation officer who shall forward it to the Magistrate referred to in section 173 as part of the documents referred to in clause (a) of sub-section (5) of that section.
- Nothing in this section shall be construed as rendering lawful any examination without the consent of the woman or of any person competent to give such consent on her behalf.

In the above legal provision, the term "woman" may be substituted by the term "child", and applied in the context of the POCSO Act, 2012.

4. Physical and sexual examination-

The medical examination is a very important tool in evaluating sexual abuse. The physical examination can identify both new and old injuries, detect sexually transmitted diseases and provide evidence of sexual contact. If done in a sensitive manner, the examination can answer any questions or concerns the child may have and reassure the child about their well-being and that their body is private. The exam

also has evidentiary value in a court of law.

i) Record the height and weight of the child (neglect may co-exist with sexual abuse). Note any bruises, burns, scars or rashes on the skin. Carefully describe the size, location, pattern and colour of any such injuries.

ii) Check for any signs that force and/or restraints were used, particularly around the neck and in the extremities.

iii) Record the child's sexual development stage and check the breasts for signs of injury.

iv) If the survivor is menstruating at the time of examination then a second examination is required on a later date in order to record the injuries clearly.

v) Some amount of evidence is lost because of menstruation. Hence it is important to record whether the survivor was menstruating at the time of assault/examination.

vi) The same applies to bathing, douching, defecating, urinating and use of spermicide after the assault.

5. Necessary investigations-

The following investigations are routinely carried out:

- Gram stain of vaginal or anal discharge

- Genital, anal, and pharyngeal culture for Gonorrhea
- Genital and anal culture for Chlamydia.
- Serology for syphilis
- Wet preparation of vaginal discharge for Trichomonas vaginalis
- Culture of lesions for herpes virus
- Serology for HIV (based on suspected risk)

Collection of forensic evidence employing the Rape Kit and Urine toxicology screen (if the abuse or assault was likely to be substance-facilitated) may be required.

6. Collection of evidence from medico legal aspect ⁸-

The purpose of a forensic examination is to ascertain the following:

- Whether a sexual act has been attempted or completed. The absence of injuries does not imply consent of the victim for the act.
- Whether the sexual act is recent and if any injury has been caused to the child's body.
- The age of the survivor in cases involving of children and adolescents.
- Whether alcohol or any other intoxicating substances have been administered to the child.

7. Appropriate treatment of physical and mental injuries -

Emergency medical care and emotional support must be provided in a case of CSA.

Referral to a mental health specialist should be made in all cases, which is required for evaluation and treatment of acute stress reaction, and subsequently posttraumatic stress disorder (PTSD).

Referral to other specialists should be made as required and psychological health interventions should be made for short term and longer term.

8. Post-exposure prophylaxis for HIV and other STDs -

Treatment of sexually transmitted diseases (STDs) is carried out with appropriate medications.

9. Pregnancy prevention and management among girls who have been sexually abused-

In post-menarchal girls, the likelihood of pregnancy and the need for emergency contraception must be considered.

10. Ethical principles and human rights standards for reporting child or adolescent sexual abuse-

The POCSO Act calls for mandatory reporting of sexual offences so that the doctor or any other

health care professional who has the knowledge that a child has been sexually abused is obliged to report the offence, failing which he may face legal punishment (6 months imprisonment and/ or fine (Sections 19 and 21 of the POCSO Act)).

Conclusion: CSA is a criminal act. The practice is globally prevalent and occurs in all sections of society. Health care professionals are often the first contact for CSA victims and thus need to have the expertise for its adequate clinical evaluation and treatment, and be knowledgeable of the legal aspects. They are in a unique position to protect children from sexual assault and its consequences. They can -

- teach parents about safe, unsafe and uncomfortable touch and how to keep their children safe.
- teach children how to protect themselves.
- provide appropriate care and treatment to the survivor.
- give social, psychological and legal guidance to the survivor and the family.
- help the process of justice delivery by conducting accurate and complete forensic medical

examination and be willing to testify in court.

The POCSO Act envisages a multidisciplinary approach that will be conducive to medical care and justice delivery for a sexually abused child. And in the end as a society, everyone should also regard themselves as custodians of children, and be ready to speak up for them and protect their rights. Government should also create an interactive environment of different professionals, and use social media platforms for spreading public awareness. Commitment to ensure the safety and security of children must not be regarded as acts of generosity; it is their right.

Funding: None;

Competing interests: None stated.

References-

1. WHO, Report of the consultation on child abuse prevention, Geneva, World Health Organization, 1999, p. 15.
2. oylance R, Foley S, Manzel K. International perspectives on child sexual abuse. In: Srivastava RN, Seth R, Van Niekerk J, editors. Child Abuse and Neglect: Challenges and Opportunities. New Delhi:Jaypee Brothers, 2013. p.40-50.
3. Wihbey J. Global Prevalence of Child Sexual Abuse, 2013. Available from: Journalistresource.org/studies/.globa

- lprevalence-child-sexual-abuse. Accessed May 30, 2017.
4. Study on Child Abuse: India (2007). Ministry of Women and Child Development, Government of India. Available from: www.wcd.nic.in/childabuse.pdf. Accessed May 30, 2017.
 5. Cashmore J, Shackel R. The Long Term Effects of Child Sexual Abuse. Child Family Community Australia, 2013, Paper No 11.
 6. Responding to children and adolescents who have been sexually abused: WHO clinical guidelines. Geneva: World Health Organization; 2017. Licence : CC BY-NC-SA 3.0 IGO.
 7. Model Guidelines under Section 39 of The Protection of Children from Sexual Offences Act, 2012. Available from: <https://wcd.nic.in/sites/default/files/POCSO-ModelGuidelines.pdf> Accessed December 1, 2022.
 8. Guidelines and Protocols. Medicolegal Care of Survivors/ Victims of Sexual Violence, 2014. Available from: <http://mohfw.nic.in>. Accessed May 30, 2017.
 9. UNICEF and Indian Medical Association. Child Sexual Abuse: Prevention and Response. Information for Doctors and Health Care Professionals (2015).

Disclaimer/Publisher's Note: The information statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of IJMJ and/or the editor(s). IJMJ and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any innovation, ideas, methodology, instructions, conclusions, or products referred to in the content.

Copyright: © 2023 by the authors. Licensee GLAFIMS ASSOCIATION, Aligarh, India. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

International Journal of Medical Justice



Official Publication of GLAFIMS ASSOCIATION
An international peer and expert reviewed journal in
the service Of Forensic Medicine, Forensic Toxicology,
Forensic Science and Allied Forensic Sciences
Email: editor@ijmj.net Web: <https://www.ijmj.net>

Table of Content

Volume 1, Issue 1, Year 2023

January -June 2023

Date of Publication: Sunday January 15, 2023

Date of Online Availability: Thursday January 26, 2023

Content list Available at <https://www.ijmj.net/archive/2023>

Journal Homepage: <https://www.ijmj.net>



OpenAIRE ICMJE INTERNATIONAL COMMITTEE of
MEDICAL JOURNAL EDITORS



S. No	Title and authors	Type	Corresponding Author	Page No.
1	From the Desk of Editor in Chief Birth of new journal dedicated to serve medical justice system, IJMJ Imran Sabri.	Editorial	Dr Imran Sabri	1-2
2	Job and social problems due to morphine positivity: abuse or food contamination? Mattia Sicilia, Michela Maria Guarino, Elisabetta Moroni, Vincenzo Agostini.	Original	Dr Vincenzo Agostini	3-22
3	Art of Parenting vs Parental Child Abuse - Choose a Right Path Pragnesh Parmar, Gunvanti Rathod.	Review	Dr Pragnesh Parmar	23-26
4	A Fatal Case of ruptured carotid aneurysm A. Haricharan, Soibam Neha, Asho Angami, Lourembam Frieny, Th. Meera Devi.	Case Report	Dr Haricharan A	27-31
5	The POCSO ACT 2012 : Stop the Abuse , Stop the Cruelty , Stop the Slaughter ! Perumal P, Ravindra S Honnunar, Lakshmibharathi M.	Review	Dr Perumal P	32-48
6	A roadmap for saviors: role of doctors in medicolegal care in relation to POCSO ACT Dhananjay Kumar, Satish Kumar Khalkho, S.K. Pandey.	Review	Dr Dhananjay Kumar	49-57

Copyright (c) 2023 International Journal of Medical Justice, IJMJ. This work is licensed under a

[Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.](https://creativecommons.org/licenses/by-nc-nd/4.0/)



Editorial Office:

G-1, City Center, Medical College Road, Aligarh 202001 UP, INDIA
Email: glafims@gmail.com web: www.glafims.org Mobile No: 0091-9897830036



THE OFFICIAL PUBLICATION OF

IJM

GLAFIMS ACADEMY

GLAFIMS ASSOCIATION
(NON GOVERNMENT ORGANIZATION)

CIN NO: U80301UP2021NPL157354

**An international peer and expert reviewed journal dedicated
in the service of Forensic Medicine, Forensic Toxicology,
Forensic Science and Allied Forensic Sciences**

E-Mail: glafims@gmail.com web: www.glafims.org